A Gulf Publishing Company Publication

The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 53, NO. 12

JUNE 7, 1929

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, EDITOR

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Published Weekly

by

GULF PUBLISHING COMPANY

OFFICE OF PUBLICATION
3301 Buffalo Drive, Houston, Texas

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Issued Friday of each week. Single copies 10 cents. Subscription price: Domestic $1.00 a year, Foreign $1.00 a year. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.

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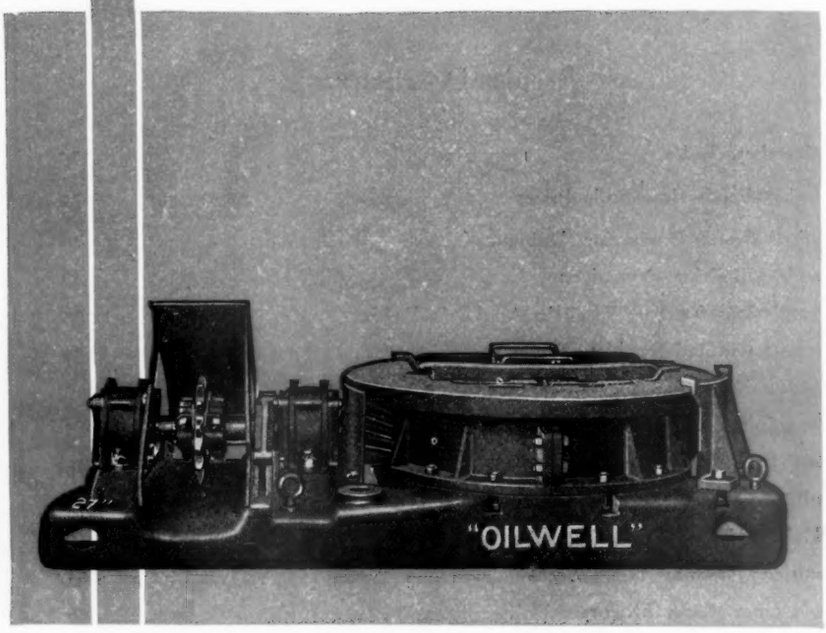

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Say you saw it in The OIL WEEKLY

Group paper read before Mid-Continent District of the American Petroleum Institute Division of Development and Production Engineering, Tulsa, May 28-29

Straight Hole Practice

By W. J. WHITFORD
Barnsdall Oil Company

THE subject of crooked rotary holes in the Mid-Continent, particularly in the Greater Seminole area, has become of widespread interest and there has been considerable valuable data published as to how crooked various holes were and what effect such crookedness had on the tangible drilling costs and the more or less intangible production costs. Geological difficulties resulting from crooked holes have also been interestingly covered.

From the stimulus of these papers, which forcibly show the necessity of boring straight holes, the oil company executive, field superintendent, engineer and contractor have been earnestly endeavoring to determine crooked hole causes, to the end that those factors within control that determine the straightness of rotary holes be properly regulated.

Very gratifying results are indicated from a study of well survey records. The subject has been attacked from all angles and many theories exist the extent to which different factors enter into the problem of drilling straighter holes. It seems that this was a good time to pause in the labor to take stock and to compare ideas and opinions against recorded performance. Through the comparison of notes serving to clarify the problem and demonstrating what has been learned it is possible that further improvement in straight hole drilling practice in the Mid-Continent may be brought about.

With this comparison in mind, a questionnaire was compiled and sent to many of the rotary drilling contractors of this section. The questionnaire was designed to bring out the extent of present knowledge on the subject, as well as ideas and opinions as to future practice. The contractors' answers to such questions, concerning the methods employed to keep the hole straight, were, as far as possible, checked against the oil companies well records. The majority of opinions, of these contractors that the records showed has drilled the straightest holes was tabulated factor by factor and put together as a sort of symposium on straight hole practice. It is well to remember that there is no thought that this is the final answer to the problems of drilling straighter holes, but merely a correlation of present knowledge from the number of comparatively straight holes that these contractors have drilled.

Many contractors, through their experience in drilling these holes have worked out interesting ideas and plans for future improvement of their methods, and those ideas which are seemingly well founded and of a type to stimulate profitable discussion at the meeting have been included in the accompanying paper.

One point which the questionnaire brought out most forcibly was the need for the contractors to keep better records of their own performance. It would seem highly important, considering the size of the financial investment at stake and the crooked hole penalty enforced by many of the companies in having the contractors plug off his crooked hole at his own expense, that the contractor should keep a close check on all phases of his drilling operations that affect the straightness of his hole. On one question there was practically 100 per cent. agreement, and that was that the oil companies were not paying the contractor enough money.

The response to the questionnaire was very gratifying and the Drilling Practice Committee of the American Petroleum Institute has expressed thanks to the contractors, oil company superintendents and engineers who participated for their generous co-operation and support.

THE proper weight in pounds per square inch to use in drilling a straight rotary hole, as indicated by the weighing devices now in common usage, has a rather wide range to judge from reports received from more than 30 representative drilling contractors. At first thought it may seem strange that so wide a variation between minimum and maximum recommended weights should exist in the same area. After a little consideration of the obstacles entering into the solution of the problem and a review of the meagerness of our present information, it is easier to understand the situation.

Recommended weights have been worked out, for the most part, by the trial and error method, but enough time has not elapsed or enough data been collected to allow closer limits to be accurately determined. Secondly, the instruments for measuring the weight carried on the bit do not appear to be reliable enough to be sure of the accuracy of the indicated load in terms of pounds per square inch on the bit head. This question is taken up more fully later. Probably, in recognition of this fact, several contractors have indicated the weight they carry in the gauge in terms of "points" rather than pounds. A tabulation of the recommended weights shows a range from minimum to maximum of from 2000 to 30,000 pounds. However, in checking over the weights carried by contractors, who have drilled the straightest holes, the range would seem to lie between 7000 pounds per square inch for shale to 12,000 pounds for lime, with the average about 9000 to 11,000 pounds. These weights, of course, apply to 6-inch drill pipe and are for the most part taken from the Greater Seminole area.

It seemed to be almost unanimous that it was advisable to change the indicated weight when drilling from a soft to a harder formation, or vice versa. The amount of change in weight to be carried varied from 2000 to 8000 pounds. Some contractors increased the weight carried in shale over the weight carried in lime while some preferred to carry the greater weight in the lime. Several of the contractors who have a large number of straight holes to their credit recommended taking practically all of the weight off the drill stem upon striking a harder formation until the bit had started a full gauge even hole and running smoothly, and then slowly increasing the weight to maximum.

The disc, fishtail, and special cutter bits should carry less weight than the rock bit. From 2000 to 5000 pounds less weight was unanimously recommended, with the exception of one contractor who recommends from 3000 to 4000 pounds more on a disc bit than on a rock bit. He has straightened up holes in this way when no other method seemed to work. He accompanied this increase in weight with a rotation from 60 to 65 revolutions per minute of the rotary table.

Most answers concerning the speed of rotation for a given weight indicated that this factor is considered of major importance in the matter of drilling a straight hole, but also that at the present time we do not have sufficient data to determine just what the relation should be between speed of rotation and the weight carried on the bit. Several expressed the opinion that in the solution of the proper ratio between the speed of rotation and the weight carried, drilling through the different formations would

result in higher cutting speeds per unit of time at a less cost per foot, this increasing the drilling life of various bits and the drilling of straighter holes.

About half of the contractors increased the weight on the bit as the cutters dulled. It would seem that in the case where the bit head was already carrying the maximum recommended weight that this practice would result in forcing or crowding the bit, thus causing the bit to drill off center. The well surveys of the holes drilled by contractors who do not follow this practice would seem to bear out this idea, as they have drilled the straighter holes.

To use the words of one man who has spent considerable thought and time working on this point, "The best results are obtained, as a rule, by establishing a certain cutting rate per hour, depending on the nature of the formation being drilled, and when cones become dull to a point where they will not cut this rate of footage without adding more weight, pull the bit out of the hole." The footage cut to the set of cutters with this procedure is very close to the average obtained under former conditions when greater weights were carried. In other words, by using the proper weight, the cutters will have a better cutting action and cut practically as much hole as in the case where they are crowded.

The speed of rotation recommended in respect to the weight carried on the bit ranged from 35 r.p.m. to 50 r.p.m. for shale and from 50 r.p.m. to 80 r.p.m. for lime, 55 r.p.m. seemed to be the most favored speeds of rotation. A large number of contractors recommended slower speeds of rotation if the weight carried on the bit is increased. Disc and fishtail bits should rotate faster than should rock bits. The slower speed of rotation on the rock bits was claimed to lessen the wear on cutters, bushings and drill pipe and to prevent the pipe from whipping the walls and causing unnecessary caves.

Depending upon the formations and up to certain limits, the more weight put on the bit the more hole cut, was the majority of opinions in the questionnaires. To just what maximum limits of weight this ratio extends was not stated, except that the weight limits recommended in drilling straight holes was held to be a great deal less than the weight that would drill the maximum footage per day. There is not enough data available to say just how much less hole per unit time is being cut under the lessened weight necessary to drill straight holes, but from the information at hand, the gap is not as most contractors seem to think.

Mud Fluids

The consistency of mud fluids is considered important in drilling a straight rotary hole only in so far as it prevents the hole from caving. It was the consensus of opinion that cavings in the bottom of the hole had a tendency to drill off to one side of the true bore. Mud of improper consistency would allow side walls to break down under the action of the turning drill stem and this sloughing in would enlarge the diameter of the hole, thus depriving the drill pipe of its needed side wall support. No specific data was offered that would enable one to show the extent to which the proper consistency of the mud fluid would aid in keeping a hole straight.

This subject of the proper use of mud would seem to warrant considerable more attention in the Mid-Continent from other angles aside from that of aiding in the drilling of straight holes. From eight pounds per gallon to 12 pounds per gallon was recommended for the proper weight of mud in straight hole drilling.

As water weighs approximately 8.33 pounds per gallon, mud weighing only eight pounds per gallon would probably be fairly light. Many contractors said they had never paid any attention to the mud except to regulate it as to its cuttings content, for protection to their pumps, and for the type of formation being drilled. They carried their mud as thin as it was possible to do and still be able to prevent the hole from caving, in order to keep the bit free from cuttings, thus facilitating the drilling speed.

From the Bureau of Mines investigation of over 100 wells it was established that in the greater Seminole area the general practice has been to start drilling with clear water; the weight of the mud as the drilling progressed usually depending upon the amount of mud the hole made. Samples from 1500 feet averaged only about nine pounds per gallon. As the drilling progressed this weight increased to about 10 pounds per gallon, but whenever it rained it would decrease to nine or 9.5 pounds per gallon. The maximum weight which the Bureau of Mines found anywhere, except when the mud was weighted to control high gas pressure, was 11.5 pounds per gallon, with the general average about 10 pounds per gallon.

The use of mud-laden fluid in "spudding in" a well was not considered of very great importance by a large majority of the contractors. A few however, made the point that from 1200 to 1500 feet of hole is often drilled before the drilling fluid is much more than water, and they feel that this is poor practice. A little work is being done now on the use of mud-laden fluids of about 10 pounds to the gallon for "spudding in," and the acid bottle records of the first 1500 feet of these holes indicate that there is an appreciable advantage in this practice.

The opinion of the effect of so-called high circulating fluid pressures in the drilling of straight holes seemed to be pretty well divided. There were theories offered on both sides of the question, but due to the lack of any sustaining data this question will be left for discussion which may bring out specific information that will throw more light on this subject.

Pumps Not Responsible

There has been much discussion, both oral and written, on the effect of the large mud pumps now in common usage. A review of the answers on this question would seem to exonerate the big "mud hog" from any great amount of blame for crooked holes.

The claim is that the larger pumps run at slower speeds in handling the same volumes than do the smaller pumps, and therefore, have a longer life and that where certain formations are encountered the large pumps are necessary to keep the bit free from cuttings which otherwise would seriously impede the speed of drilling. While the smaller pumps still have some advocates, the larger volumed, higher pressured pumps with the 16-, 18-, and 20-inch stroke are the favorites.

The majority of the contractors do not change the speed of their pumps when drilling from one formation to another, as they are of the opinion that practically all of the formations encountered in Oklahoma are hard enough to prevent easy washing. A few contractors, however, that have had better than average luck in drilling straight holes, advise that they slow up the pump somewhat when leaving a shale formation and entering a lime or other hard formation.

Equipment

There was a remarkable unanimity of opinion expressed to the effect that the present rotary equipment was very well suited for the drilling of straight holes.

The use of heavier and stiffer drill collars was suggested particularly by that group of contractors that does not favor the use of special side reamers and the further development of hydraulically, electrically, or mechanically operated weight control machines. Mechanism that would accurately regulate the actual weight imposed on the bit was thought by many to be the next logical step in improving our present equipment.

One careful observer felt that the basic design of nearly all of the rotary bits in general usage will have to be changed before the problem can be completely solved. It was pointed out that in some bits the fluid ports were so placed as to aid in the hole going crooked, while other bits had their cutters so placed that the rotation of the bit itself would tend to cut eccentric circles instead of rotating concentrically around one axis. It was interesting to note that a large number of the contractors felt that the rock bit, at least in the greater Seminole area, was the most satisfactory bit from the top to the bottom if a straight hole was desired. The records on the more recent wells of several contractors who used nothing but rock bits showed straighter holes than did their previous wells drilled in the same areas and under as nearly as possible, the same conditions with other types of bits.

Guides for Bit

The main objection to the use of side reamers was the increased hazard in the case of a fishing job. Some contractors felt they could drill as straight a hole without the aid of side reamers, however the straight hole records on several wells drilled recently in the same area showed consistently straighter bores from top to bottom for those holes using the side reamers than it did for the holes drilled

(Continued on page 99)

NEW MEXICO DRILLING
Will Show "Low Down"
THIS YEAR

By H. H. KING
Staff Representative

ARTESIA, New Mexico.—Prodded by drilling obligations attached to mineral permits on federal and state owned lands, operators in Lea County, New Mexico, are preparing to have a showdown in the rest of the year on the oil production possibilities of the series of "lime highs" that extend lengthwise in the county from established oil areas to the south in Winkler County, Texas. Deep dry holes have a slight majority over the number of oil and gas producers that have been completed in Lea County, with a combined aggregate expenditure of more than $3,000,000 for equipment, labor, transportation, fuel, etc., while the cost of drilling the tests now under way, those starting and planned for the present year, will probably exceed the above figure.

History of oil and gas development in Lea County is somewhat of a parallel case to that of the Texas Panhandle, since heavy gas production has been found in the lime horizon at scattered points. The first group of oil completions has been of small caliber, but of an encouraging nature. The former county's first gas wells have been difficult to handle in penetrating below the heavy gas producing horizon, as was the case with early development in the Panhandle.

Sufficient Pipe Lines

Lea County offers a contrast in the way of pipe line outlet for oil and gas production, especially with oil transportation facilities, as sufficient pipe line capacity is available for the county to accommodate an oil area of major proportions. Four additional major trunk lines are waiting an opportunity to invade the county with extensions from Winkler County. The Texas Pipe Line Company has completed a 10-inch line into the southeastern part of the county. Humble Pipe Line Company has an eight-inch carrier in service. Both concerns plan to lay a network of gathering lines to the widely scattered wildcat producers on the completion list. Proration enforcement and natural decline in production of leading fields in West Texas are responsible for eagerness on the part of most trunk line companies in the latter district for connections in Lea County.

At the close of May, Lea County was credited with 12 oil wells, which registered a combined initial output of 4355 barrels, but this volume materially shrunk when storage or pipe line connections permitted a thorough test of the production. Eight straight gas wells have been completed in the county, with a combined initial output of 266½ million cubic feet daily.

Owing to the great area that has commanded the attention of wildcatters in the county, a total of 23 deep dry holes have been exacted as a toll towards locating production. The combined footage of hole drilled in these failures is placed at 101,149 feet, thus giving an average depth of 4398 feet for each dry hole in the county, holes junked, or abandoned above the 2000-foot level not included.

A late check on current activity in Lea County reveals 20 cable tool and rotary rigs running; nine derricks and rigs up; eight bonifide locations; and three tests shut down for funds, or on accunt of bad hole. Actual oil production in the county at present is about 1500 barrels daily, but this should be more than doubled when tankage and pipe line facilities are provided for capped producers.

Drilling Costs

Drilling costs are a big item on the books of Lea County operators, and expenditures for completed wells range from $50,000 to $125,000 each, with the latter figure prevailing in instances where heavy gas is encountered and serious fishing jobs follow. Responsible contractors are making turnkey contracts for either cable or rotary drilled holes, at quotations ranging from $10 to $12 per foot. Rotaries are becoming more popular as the water and fuel supply becomes available in the isolated areas. Federal and state requirements dealing with the casing off of the salt and water horizons are strict, depending upon the ownership of the fee land. To comply with casing regulations on federal permits, the following pipe record is typical for a cable tool hole: 350 feet of 18⅝-inch surface pipe; 650 feet of 15½-inch; 1100 feet of 12½-inch; 1500 feet of 10-inch; 2900 feet of 8⅝-inch (usually cemented on top of the brown lime); 3200 feet of 6⅝-inch pipe. Except for the 15½-inch string, the bulk of the above pipe is left in the hole in the event of a commercial producer.

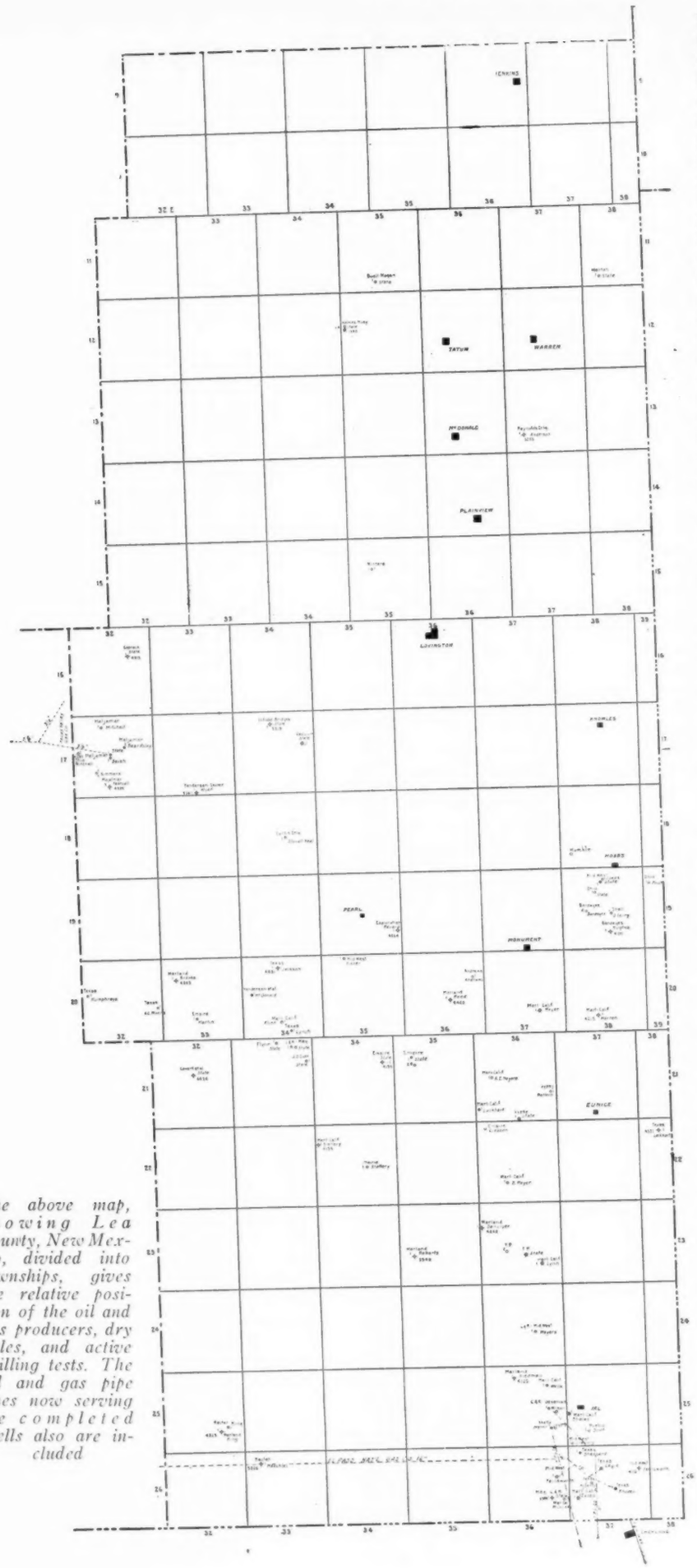
Discovery

Oil and gas discovery honors in Lea County go to the Maljamar Oil & Gas Corporation, with M. E. Baish of Artesia, directing operations. This concern's Baish-Government permit 1, Section 21-17S-32E, opened what is now known as the Maljamar pool, located on the western edge of the county, with a 100-barrel producer at 3920-4124 feet. This well also made 10 million cubic feet of gas at 3115 feet. It was officially completed July 16, 1926. The company has since added three more producers of like caliber. The oil produced in this pool averages about 36 gravity, and is being marketed via a small oil line that was extended over from the Artesia field. The Illinois Pipe Line Company is purchasing the oil, and disposing of same with local refineries connected to its Eddy County system. Just across the county line to the west of the above mentioned Maljamar wells, The Texas Company has a 40-barrel producer, and the Flynn-Welch and Yates interests have a 140-barrel well. Considerable gas is available from these wells, and a market for a portion of same was recently made available by the Pecos Valley Gas Company, which serves Artesia and other nearby points in the Pecos River valley region.

Owners of big gassers in the Jal district, located in southeastern part of Lea County, have partially solved their market problems by making 15-year contracts to deliver a fixed quota of gas daily to the El Paso Natural Gas Company, which is ready to begin delivering this gas to El Paso and intermediate points, as well as across the border, via a 16-inch welded line about 204 miles in length. This purchaser has made contracts with the Midwest Refining Company; Marland Production Company-The California Company; and the three-way partnership of The Texas Company, Amerada Petroleum Corporation and the Columbia Carbon Company. Contracts are being solicited from other owners of recently completed gassers also. The first group of companies to make contracts to supply gas received three cents per thousand for the first three years on all "sour" gas delivered, and four cents per thousand for sweet gas. The former grade must be treated before marketed for domestic consumption. Since the rock pressure of gas wells in the Jal district ranges from 800 to 1500 pounds, this gas line will not need a field booster station to deliver fuel into El Paso.

The joint operations of the Marland

XUM



The above map, showing Lea County, New Mexico, divided into townships, gives the relative position of the oil and gas producers, dry holes, and active drilling tests. The oil and gas pipe lines now serving the completed wells also are included

Production Company and the California Company, the latter is subsidiary of Standard Oil Company of California, have figured prominently in Lea County developments, with five new tests under way. These two concerns recently completed an initial program of seven tests in the county that yielded four gassers, one producer and two dry holes, while in addition to having three-quarter interest in the above, Marland Production Company has drilled six failures, besides one across the line in Eddy County, all being on federal permits. Marland Production Company's Siedeman 1, Section 4-25S-36E, is credited with being the fastest drilled hole in the county, even though considerable shutdown time occurred because of using a field generating unit to supply electric power to operate the motor driven cable tools. This test was spudded March 4, 1928, and was ordered abandoned as a failure at 4125 feet on June 7, 1928.

The highest gravity oil being produced in Lea County is credited to The Texas Company (formerly called Texas Production Company in New Mexico) et al's Rhodes 1, Section 22-26S-37E, which was completed in October, 1927, as the first producer in the county, outside of the Maljamar pool, with an initial production of 23 million cubic feet of gas and 120 barrels of oil at 3040-3213 feet. This well has supplied fuel gas for a number of other tests in the general area, and oil pumped from the gas trap averages about 44 gravity, but limited to about 20 barrels daily.

A substantial improvement in transportation and communication facilities to and from Lea County was accomplished early in May, as the first direct telephone service out of the county was provided at Jal. Southwestern Bell Telephone Company extended its toll line from the Hendrick field area to Jal, using the poles erected by The Texas Pipe Line Company. Heretofore, scouts and field men have been forced to drive overland to Carlsbad, Artesia, or some other point to the west of Lea County, and to the south at Wink or Kermit, Texas.

Direct railroad facilities to the southeastern corner of Lea County were provided in May, when the Texas & New Mexico Railroad (T.&P. Ry.) placed in operation its Monahans-Wink-Cheyenne spur line. The latter town sits in the center of the Scarborough ranch pool, and is to serve as the delivery point on drilling equipment destined for most of Lea County, especially the southeastern portion. The above spur line terminates at the New Mexico line, but owing to this point being surrounded by impassable sand dunes, the freight is dumped off at Cheyenne and trucked around the bad stretch of sand country. Application is pending for the T. & N. M. Railroad to continue north across Lea County to the town of Lovington, while the Santa Fe Railroad also proposes to cross the county with a line from Seagraves. Freight destined for Lea County and unloaded at Cheyenne is given the same rate as that applying to the Pecos, Texas, group

(Continued on page 102)

Production *and* Utilization *of* *Natural Gas in California*

By CLAUDE C. BROWN

THE first production of natural gas in commercial quantity in California was developed in the old Salt Lake field, located just west of Los Angeles. This development took place in 1901, the maximum gas production being reached in 1908. The gas from this field contained high percentages of carbon-dioxide and nitrogen, with a relatively low heating value of approximately 813 B. T. U. per cubic foot. It was utilized for field fuel and the surplus was distributed to a portion of the gas consumers of Los Angeles.

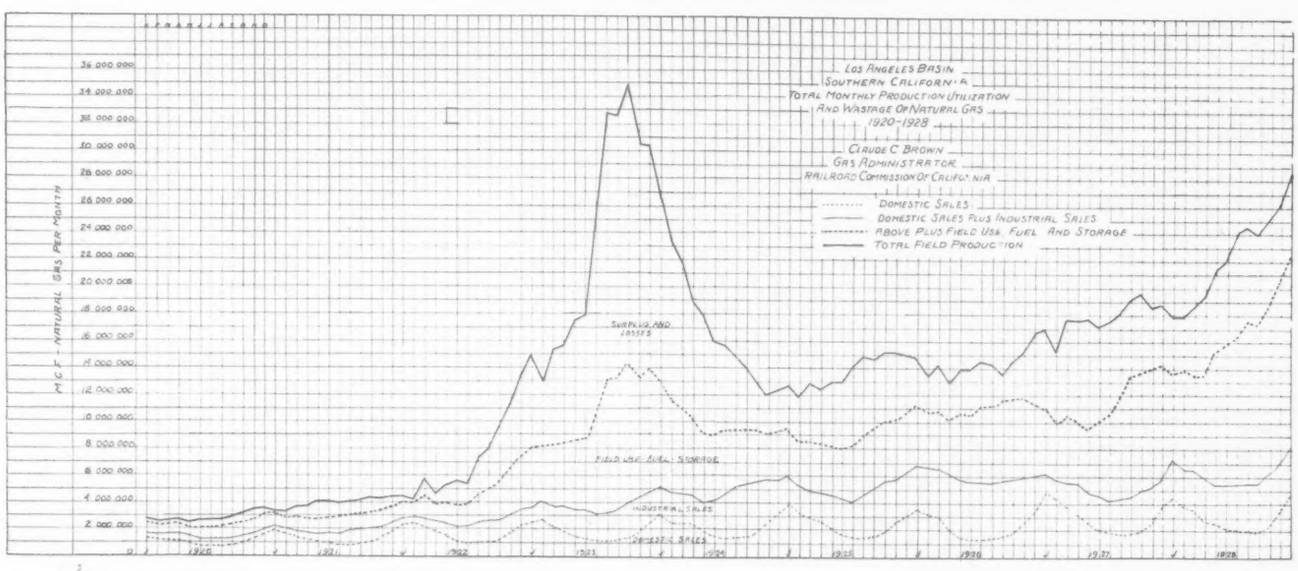
During 1900, drilling operations were started in the Midway field, located in the south end of the San Joaquin Valley, in the western portion of Kern County. However, it was not until 1908 that natural gas production from this field reached commercial proportions. About that time extensive dry gas areas were developed at Buena Vista Hills and Elk Hills adjacent to this area, and the surplus gas over and above field requirements was piped to Bakersfield for general consumption. Since their discovery these dry gas areas have yielded in excess of 90,000,000 M. C. F. and it is estimated that they still contain in excess of 900,000,000 M. C. F.

During 1913 a 110-mile 12-inch transmission line was laid by the Midway Gas Company from this gas producing area to Los Angeles for the purpose of transmitting the surplus available gas to the Los Angeles market. This line was the first long distance gas transmission line in the state, and it is still in operation.

Claude C. Brown, gas administrator for Railroad Commission of California has compiled the most comprehensive statistics on the production and utilization of natural gas for California ever compiled in any state. Mr. Brown's complete report to the Railroad Commission some two years ago was largely responsible for the start to conserve gas in the state, action by the governor following study of the report.

From this beginning the production and utilization of natural gas has grown rapidly in California. As new fields were discovered, the casing head gas production, over and above field and refining fuel requirements, was taken by the distributing gas utilities and piped to the general market. The present transmission network contains over 850 miles of transmission lines.

This available surplus gradually increased until 1922 when the coming in of three prolific fields in town-lot areas, namely, Signal Hill, Santa Fe Springs and Huntington Beach fields, all in the Los Angeles Basin, greatly increased the production of this resource. During the latter part of 1923 when these fields were at the peak of their flush production, the monthly wastage, or surplus gas, blown to the air reached the huge figure of 23,732,000 M. C. F. per month for the entire state. The accompanying charts show the monthly production of a number of the major individual fields in the Los Angeles Basin and the total production, utilization and wastage of all the



NATURAL GAS PRODUCTION UTILIZATION AND WASTAGE IN CALIFORNIA

YEAR 1920

Month	Field Total Production MCF	Total Utilization MCF	Total Wastage MCF
January	5,600,000	5,300,000	300,000
February	5,400,000	5,130,000	270,000
March	5,600,000	5,300,000	300,000
April	5,500,000	5,300,000	200,000
May	5,400,000	5,100,000	300,000
June	5,500,000	4,900,000	600,000
July	5,500,000	4,900,000	600,000
August	5,600,000	4,900,000	700,000
September	5,750,000	4,950,000	800,000
October	6,000,000	5,250,000	750,000
November	6,300,000	5,600,000	700,000
December	6,500,000	6,000,000	500,000
TOTAL	68,650,000	62,630,000	6,020,000

Year 1921

January	6,400,000	6,200,000	200,000
February	6,200,000	5,850,000	350,000
March	6,600,000	5,800,000	800,000
April	6,600,000	5,700,000	900,000
May	6,900,000	5,700,000	1,200,000
June	6,800,000	5,550,000	1,250,000
July	6,800,000	5,500,000	1,300,000
August	6,900,000	5,900,000	1,000,000
September	7,100,000	6,300,000	800,000
October	7,200,000	6,300,000	900,000
November	7,200,000	6,450,000	750,000
December	7,300,000	6,750,000	550,000
TOTAL	82,000,000	72,000,000	10,000,000

Year 1922

January	7,200,000	7,000,000	200,000
February	7,000,000	7,000,000	
March	8,700,000	7,500,000	1,200,000
April	7,700,000	7,100,000	600,000
May	8,300,000	7,100,000	1,200,000
June	8,600,000	6,900,000	1,700,000
July	8,400,000	6,800,000	1,600,000
August	10,400,000	7,700,000	2,700,000
September	10,900,000	7,900,000	3,000,000
October	12,600,000	8,600,000	4,000,000
November	14,200,000	9,600,000	4,600,000
December	16,600,000	10,800,000	5,800,000
TOTAL	120,600,000	94,000,000	26,600,000

Year 1923

January	18,189,794	8,049,794	10,140,000
February	15,915,572	7,949,572	7,966,000
March	18,490,890	8,299,890	10,191,000
April	19,118,063	8,450,063	10,668,000
May	20,738,081	8,550,081	12,188,000
June	20,993,383	8,800,383	12,193,000
July	29,117,682	10,999,682	18,118,000
August	35,943,422	13,200,422	22,743,000
September	35,836,603	13,299,603	22,537,000
October	38,091,489	14,349,489	23,742,000
November	33,436,625	13,399,625	20,037,000
December	33,390,748	13,799,748	19,591,000
TOTAL	319,262,352	129,148,352	190,114,000

Year 1924

January	29,642,202	13,100,202	16,542,000
February	26,743,891	11,799,891	14,944,000
March	25,155,521	10,949,521	14,206,000
April	22,465,295	10,350,295	12,115,000
May	21,469,198	9,400,198	12,169,000
June	19,618,296	9,000,296	10,618,000
July	19,262,636	9,399,636	9,863,000
August	18,450,779	9,498,779	8,952,000
September	17,603,884	9,599,884	8,004,000
October	16,794,757	9,398,757	7,396,000
November	15,384,020	9,250,020	6,134,000
December	15,928,927	9,349,927	6,579,000
TOTAL	248,519,406	121,097,406	127,422,000

Los Angeles Basin fields for the period 1920 and 1928, inclusive.

From these charts it will be noted that although the utilization of natural gas has steadily increased, the additional production from new fields and deeper sands has more than kept pace with the increasing usage and the decline in individual field production.

The chart setting forth the monthly production of the major individual fields, illustrates, in the case of Signal Hall and Santa Fe Springs fields, the original flush production with subsequent rapid decline and the later increased production due to the exploitation of deeper production sands or horizons in the same structure. It shows also the effect of conservation and curtailment of production in the case of Ventura Avenue field—in the case of one field, Santa Fe Springs, seven producing sands have been found at different depths of from 3500 feet to 7400 feet. These sands, from the shallowest to the deepest, are known as the Foix, Bell, Meyer, Nordstrum, Buckbee, Getty and Clark sands. With the finding of prolific gas and oil sands at a depth of 8525 feet in the Big Lake Pool in Reagan County, Texas, it may be possible that still deeper sands underly the already known producing horizons in the California fields.

Since the inception of natural gas in California the number of meters through which it is served has reached 700,000 and the annual sales and these consumers now amount to over 75,000,000 M. C. F. These figures will be materially increased upon the completion of a 22-inch line, now under construction, that will carry natural gas from the newly discovered Kettleman Hills field to the San Francisco Bay area, a distance of 220 miles.

Practically all of the casinghead natural gas now being produced in California is passed through gasoline absorption plants for the purpose of extracting the natural gasoline therefrom. During December 1829 the total amount of natural gas treated (initial and re-cycled) amounted to 34,650,000 M. C. F. from which was obtained a total of 55,500,000 gallons of natural gasoline, the number of operating plants involved being 145.

The accompanying tables show the total monthly production, utilization and wastage of natural gas in California for the period January 1, 1920 to January 1, 1929, from the 36 producing fields in the state.

Conservation

From the above data it will be noted that there has been in the past and that there is at present a large wastage of natural gas in California. The reason for this condition is the rapid drilling up of town lot fields which produces a steep incline in the production curve of the field with a consequent early peak and tremendous wastage which is followed by a rapid decline to the normal decline curve. The market cannot ab-

sorb this sudden flush production and the result is that a large portion of it is lost. Unlike oil, the cost of providing storage for surplus gas production is entirely unfeasible from a financial standpoint, for while the cost of large tanks for the storage of oil averages $0.35 per barrel of storage capacity, the cost of large gas holders averages $75 per M. C. F of storage capacity. Upon this basis the cost of storage per million heat units of oil is $0.06 as compared with a cost of $68.20 per million heat units of gas. Or, from the standpoint of the value of the commodity, the ratio of the storage cost of oil and that of natural gas is 29 to 75,000.

The desirability of the conservation of natural gas is apparent for a number of reasons:

First—It is generally believed to be the agency which propels the oil through the sand, toward and up through the well tubing, or casing. Its dissipation therefore resulting in the cessation of flow and the necessity of pumping the well.

Second—It is a natural resource and a valuable fuel.

Third—The demands of the gas market in which it is consumed vary widely with weather conditions and temperature, the heating load being a seasonable demand which, in California, varies as much as five to one between an average summer day and a winter day peak demand.

Fourth—This variation in demand, having no relation whatsoever to the rate of production in the field and the necessity of utilizing the gas at the time of its production, results in a surplus supply and consequent wastage of gas during the summer months.

Fifth—The production of natural gas in California is increasing in quantity as new fields are being opened up and as deeper and more prolific sands are being developed underlying known fields.

In order that the wastage of this valuable resource be minimized, thereby prolonging its availibility for economical consumption as well as its useful life in flowing wells, some very definite steps have been taken by the state government working in conjunction and co-operation with the oil operators operating in the various oil fields of California.

In the first place, a definite program of curtailment was laid out and executed. In Ventura Avenue field where a surplus production of gas existed, the wells having the highest gas-oil ratio were pinched in by the use of smaller flow nozzles. By this method the oil production was decreased 20 per cent. with a consequent reduction in natural gas production of 33 per cent. In a similar manner other fields were pinch-

(Continued on page 104)

NATURAL GAS PRODUCTION UTILIZATION AND WASTAGE IN CALIFORNIA

Month	Total Field Production MCF	Total Utilization MCF	Total Wastage MCF
Year 1925			
January	18,796,649	12,292,649	6,504,000
February	17,171,749	10,809,749	6,362,000
March	19,603,722	11,822,722	7,781,000
April	18,526,708	11,343,708	7,183,000
May	19,005,902	11,158,902	7,847,000
June	18,669,365	10,952,365	7,717,000
July	19,252,073	10,509,073	8,743,000
August	20,452,322	11,675,322	8,777,000
September	20,671,959	12,655,959	8,016,000
October	21,752,769	13,602,769	8,150,000
November	21,222,360	13,590,360	7,632,000
December	21,521,139	14,739,139	6,782,000
TOTAL	236,646,717	145,152,717	91,494,000
Year 1926			
January	22,155,418	14,809,418	7,346,000
February	20,060,617	14,973,617	5,087,000
March	22,126,212	14,087,212	8,039,000
April	21,799,430	14,279,430	7,520,000
May	22,934,594	13,824,594	9,110,000
June	22,876,453	14,454,453	8,422,000
July	22,773,314	15,382,314	7,391,000
August	22,675,897	15,831,897	6,844,000
September	23,930,427	18,595,427	5,335,000
October	23,675,147	18,189,147	5,486,000
November	24,317,734	17,577,734	6,740,000
December	25,039,530	17,079,530	7,960,000
TOTAL	293,435,459	219,250,459	74,185,000
Year 1927			
January	25,523,595	19,553,595	5,970,000
February	23,464,660	18,143,660	5,321,000
March	25,264,487	18,198,487	7,066,000
April	24,980,131	17,611,131	7,369,000
May	24,838,564	16,835,564	8,003,000
June	22,882,024	15,890,024	6,992,000
July	23,765,178	16,882,178	6,883,000
August	23,991,867	17,601,867	6,390,000
September	24,958,523	19,322,523	5,636,000
October	25,048,437	19,161,437	5,887,000
November	24,771,620	20,402,620	4,369,000
December	23,946,373	19,647,373	4,299,000
TOTAL	293,435,459	219,250,459	74,185,000
Year 1928			
January	22,932,161	18,760,561	4,171,600
February	21,568,693	17,603,293	3,965,400
March	22,578,251	18,294,351	4,283,900
April	23,217,763	18,070,063	5,147,700
May	25,353,763	19,467,763	5,886,000
June	26,237,451	19,961,571	6,725,880
July	27,172,132	19,173,215	7,998,917
August	27,479,623	20,384,370	7,095,253
September	27,026,596	20,493,930	6,532,666
October	29,177,119	21,629,657	7,547,462
November	30,673,269	21,796,605	8,876,664
December	33,413,326	23,604,044	9,809,282
TOTAL	316,830,147	239,239,423	77,590,724

Summary Years 1920—1928 Inclusive

The natural gas production set forth in the fellowing tables was produced in the following oil fields:

Athens	Cat Canyon	Santa Fe Springs
Coyote Hills	Santa Monica	Signal Hill
Huntington Beach	Buttonwillow	Whittier
Lawndale	Fellows	Piru
Newhall	Lost Hills	South Mountain
Richfield	Wheeler Ridge	Carmalia
Salt Lake	Brea-Olinda	Elwood
Seal Beach	Dominguez	Belridge
Torrance	Inglewood	Elk Hills
Fillmore	Montebello	Kettleman Hills
Seacliff	Potrero	Midway Sunset
Ventura Ave	Rosecrans	Coalinga

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Read before Mid-Continent Section, A. I. M. E., October, 1928

Pressure Control of Oil Wells[1]

By E. H. GRISWOLD[2] AND W. J. WILKINS[3]

PRESSURE control of oil wells may be defined as the adjustment of pressures within a well to obtain the most efficient and economic utilization of the natural gas energy with a minimum of sand troubles or irregular water encroachment.

The purpose of this paper is to present the methods used by the writers in applying pressure control and a discussion of the various effects occurring within the wells affected.

The benefits to be derived from the conservation of natural gas energy have been so adequately discussed and demonstrated in prior papers by various engineers that the effects on ultimate production will not be discussed other than to mention a few representative cases. The detrimental effects of irregular edge water encroachment and of sanding up are of general knowledge to the industry.

Effect on Ultimate Production

One of the strongest objections voiced against pressure control is that of the danger or inadvisability of deferring oil production by cutting the rate of production. It has been our experience that such deferred production is returned within a few weeks or months rather than years and that an increased cumulative oil production is obtained in the early life of the well by conserving the natural energy. In many cases the rate of production is increased rather than decreased by the adjustment of pressures to obtain the minimum gas factor.

Figure 1 shows the history of a Wilcox sand well in Northern Oklahoma, which was pressure controlled from completion. It is noted that during the early months while flowing naturally through the casing that the gas factor was decreased rather than allowed to follow its natural tendency to increase. A string of 2½-inch tubing was run to restrict the flow and resulted in a decreased gas factor with a more sustained rate of production. When first placed on gas-lift the gas factor again tended to increase, but after the proper pressure adjustments were made, remained approximately steady. It was necessary to defer 100 barrels per day of oil production in order to maintain this low gas factor. In March serious sanding up was encountered, but was remedied in April by a method to be discussed later, and a resultant gain in production obtained. The manner in which this well has held up in comparison to offset wells has more than justified the methods used.

Figure 2 is an example of a well on which pressure control by use of properly sized flow string gave an increase of 100 barrels per day in rate of production with a corresponding decrease in gas factor. Subsequent pressure adjustments at the well head in May after the well had declined to 275 barrels per day resulted in a sustained rate of oil production as shown by the rate-cumulative curve of Figure 3, although scarcely evident on the decline curve of Figure 2.

Co-operation of offset well owners is beneficial but not always necessary for the use of pressure control even when production is deferred. An interesting test of this was made on two offsetting Wilcox sand wells. Well X was completed with an initial of 1300 barrels and well Y with an initial of 700 barrels. Both wells had the same thickness of sand but well X was somewhat better located structurally. Well X was produced at its maximum rate without regard to gas factor, while well Y was pressure controlled by deferring production to maintain the minimum gas factor. At the end of approximately one year well Y had a larger cumulative production than well X despite the great difference in initial and flush production.

There are undoubtedly areas in which sand conditions are such that economic considerations will not permit deferring production unless operators cooperate, but in all instances the operator will be repaid for testing his wells to determine the point of minimum gas factor obtainable at the rate of production deemed necessary to prevent loss by drainage.

There has been some doubt expressed as to the relation of the minimum gas factor to the most economical gas factor from the viewpoint of ultimate profit. In some instances it is possible to produce a well at such a low rate that the producing life and operating cost may be in-

[1]Published by permission of Marland Production Company.
[2]Petroleum Engineer, Marland Production Company.
[3]Assistant Petroleum Engineer, Marland Production Company.

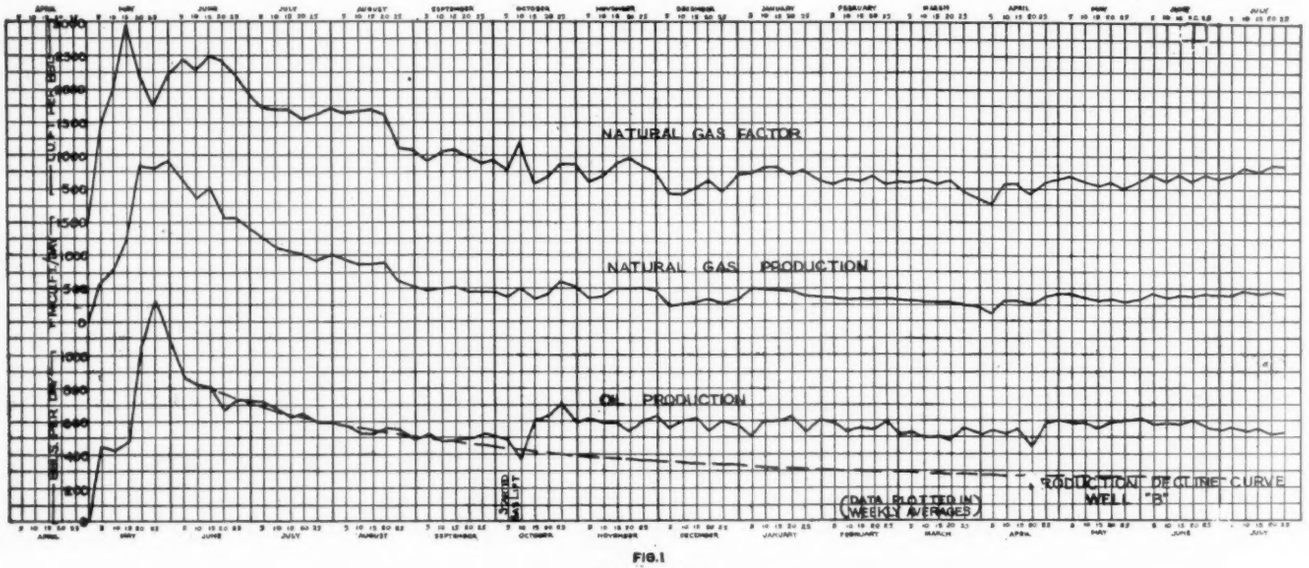

FIGURE 1

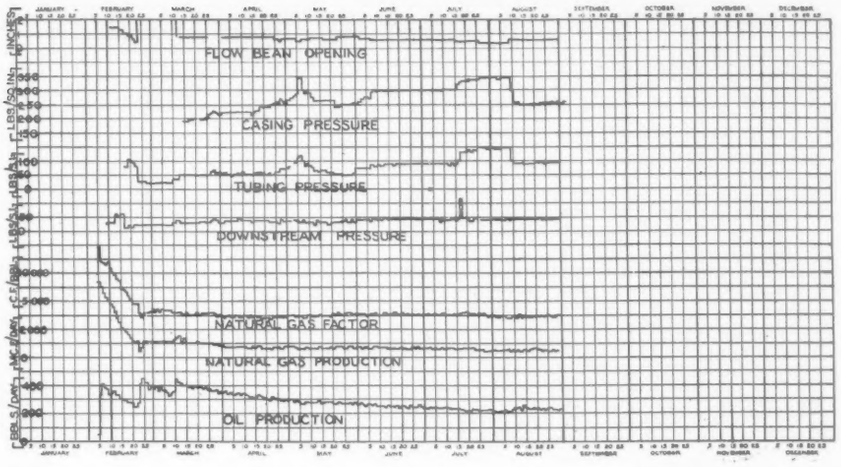

FIGURE 2

creased to where they would offset the gain in ultimate production. However, in the great majority of cases, the point of minimum gas factor so closely coincides with the most economical gas factor, that the distinction cannot be made within the accuracy of the governing elements.

Application of Control Methods to Flowing Wells

In applying pressure control to either naturally flowing wells or gas-lift wells the major adjustment is that of proper size and depth of flow tubing. The minor adjustments are made by variation of input gas on gas-lift wells and by back pressure at the flow line on both types of wells.

It has been found that surface flow line design and separator location have a marked influence on the results obtainable, especially when high back pressures are used. The stratification of oil and gas in the flow line with attendant slippage can cause excessive gas factors and thus waste either natural or supplied energy and in some cases both. A properly designed flow line is one in which all bends are convex upward. In one case a change in flow line curvature from upward concavity to upward convexity gave an increase of 20 per cent. in fluid lifted with a corresponding decrease in gas factor as gas volumes remained constant. In another case a change in location and elevation of a separator gave a 21 per cent. increase in oil production without change of gas volumes.

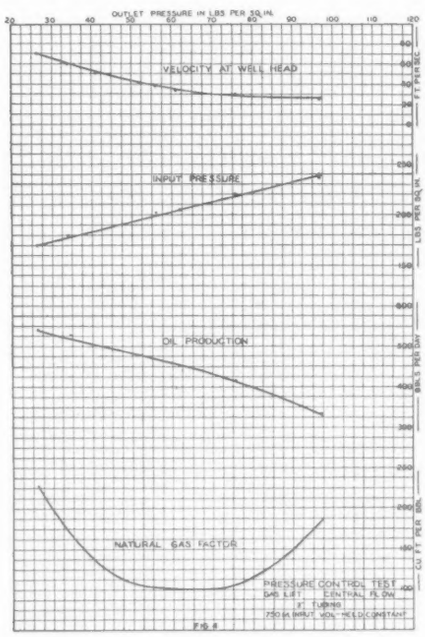

FIGURE 4

The use of adjustable needle valve flow beans is preferred to high back pressures on separators, as flow line slippage can be overcome by the expansion of gas after passing through the bean. The bean should be placed close to the well head and the down-stream pressures maintained low enough to give critical velocity through the bean, insuring constant pressure regulation, and preventing slippage back through the bean. A definite case of slippage through a flow bean was encountered when holding an up-stream pressure of 500 pounds and a down-stream pressure of 420 pounds, on a well flowing 80 barrels of oil and 1,200,000 cubic feet of gas through 6¼-inch casing. When the down-stream pressure was reduced the bean was closed to maintain the 500 pounds up-stream pressure. Reducing the down-stream pressure to 380 pounds increased oil production 100 per cent. without changing the gas production.

Tubing packers set low in the hole are preferable on naturally flowing wells which produce small volumes of gas and oil, as wells of this type start easier and flow more steadily than when packed off at the well head. On larger wells, packing off at the head is advisable for both mechanical and control reasons.

Gas-Lift as a Pressure Control Method

Gas-lift has proved to be the most flexible and satisfactory method of controlling pressures within a well. Wells which flow naturally can often be gas-lifted with much lower natural gas factors and without decreasing the rate of production. The energy thus conserved, more than compensates for the increased operating cost. Wells which appear similar in all respects may be affected differently as to natural gas factor when changed from natural flow to gas-lift without regard to gas conservation. The proper

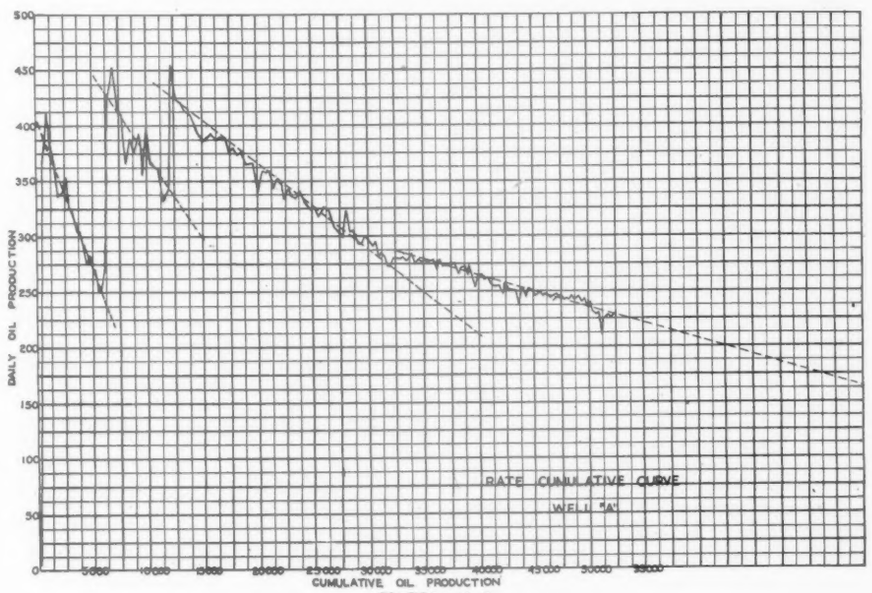

FIGURE 3

time for such a change may be estimated accurately from test data taken while flowing naturally through tubing packed off at the head. On wells flowing through casing, an indication of the time for change can be had by noting the sensitivity of the well to back pressure adjustments, but in many cases can be positively ascertained only by gas-lift installation and subsequent pressure and volume experiments.

Tubing Design

The determination of the proper size or sizes of flow tubing for either naturally flowing or gas-lift wells is a problem to which the writers have found no satisfactory mathematical solution. The use of tapered tubing has not been advocated until such a formula is available, as the benefits obtained do not compensate for the risk of running an improperly tapered string.

The proper size of a string of straight tubing can be estimated with fair ac-

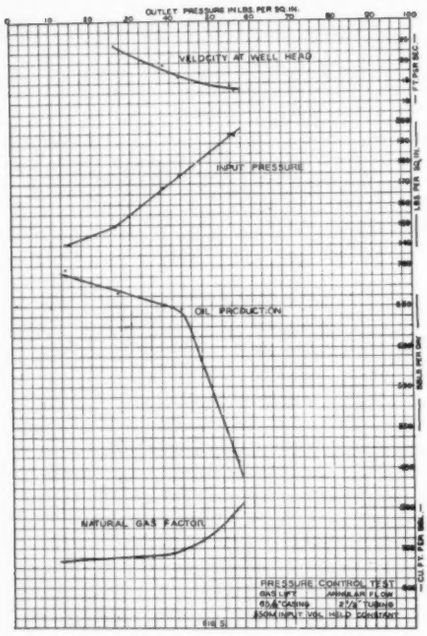

FIGURE 5

curacy from the results obtained on similar wells and can be positively ascertained by a pressure test after installation, when both tubing and casing head pressures are available.

The depth of tubing is an important adjustment in gas-lift wells with high working fluid levels, and in naturally flowing wells with high gas factors. In the former case, submergence must be adjusted to obtain the desired bottom hole pressure, while in the latter case, entry losses and slippage are thought to be the controlling factors.

Control Tests

Tests can be made to determine the suitability of the installed flow tubing, the proper outlet pressure adjustment, and in the case of gas-lift wells, the proper input volume. All three of these adjustments are interdependent and must be combined in a correct relationship. On naturally flowing wells the outlet pressure is varied throughout the required range, to obtain the resultant changes in oil and gas production. On gas-lift wells the input volume is varied while holding the outlet pressure constant at each of several pressures, and then the outlet pressure varied while holding each of several input volumes constant. By taking accurate measurements of oil and gas production, the point of minimum gas-oil ratio is obtained.

The trend of the curves plotted from these data indicate the suitability of the tubing size. The major indication of too large a tubing is a sharp downward break in the oil production curve when plotted against outlet pressure. An indication of too small a tubing is had when the oil production is gradually decreased by increasing the outlet pressure but the natural gas factor simultaneously increased. In making this determination on gas-lift wells, the data used should be that obtained with the most satisfactory input volume.

The time required for making these tests on flush wells with low natural gas factors is surprisingly short. It has been found that by making the pressure adjustments in small increments that these types of wells arrive and settle down at their new condition within a few hours so that sufficient data can be obtained within three or four days.

Old wells and wells with high gas factors require considerably more time to settle down to new conditions. In these cases the normal rate of decline is low enough not to affect the accuracy of the test and plenty of time is usually available.

When flush wells are declining noticeably the oil and gas production data may be plotted in per cent. deviation from the projected normal curves rather than in absolute values, with satisfactory results.

The importance of accurate oil and gas production measurements cannot be over emphasized while making these tests.

Figure 4 and Figure 5 show tests made on different types of gas-lift wells by varying the outlet pressure.

Figure 6 shows the results obtained by varying the input volume of a gas-lift well while holding the outlet pressure constant.

Figure 7 and Figure 8 are pressure control tests on wells flowing naturally.

It is noted that on Figure 5 and Figure 8, the natural gas factor was increased by the application of back pressure, and that on Figure 4 and Figure 7, back pressure above certain limits increased the natural gas factor. This is conclusive evidence that wells cannot be pinched indiscriminately to any desired rate of production without the risk of simultaneous waste of gas energy and a resultant decrease in ultimate recovery of oil.

Pressure Control of Pumping Wells

The gas factors of pumping wells have been varied over wide ranges by the control of fluid levels and also by the use of pumping packers. Fluid levels have been controlled successfully by changing pump

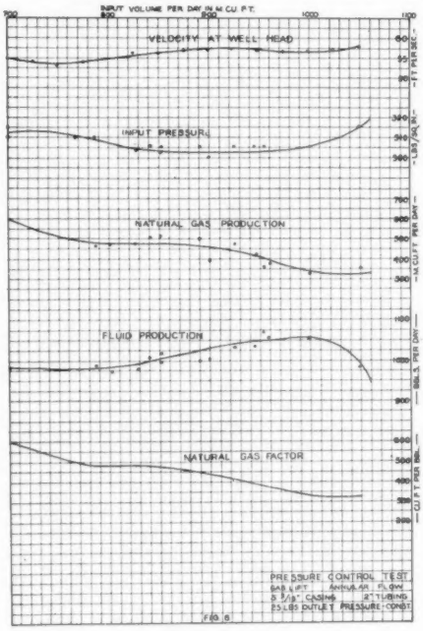

FIGURE 6

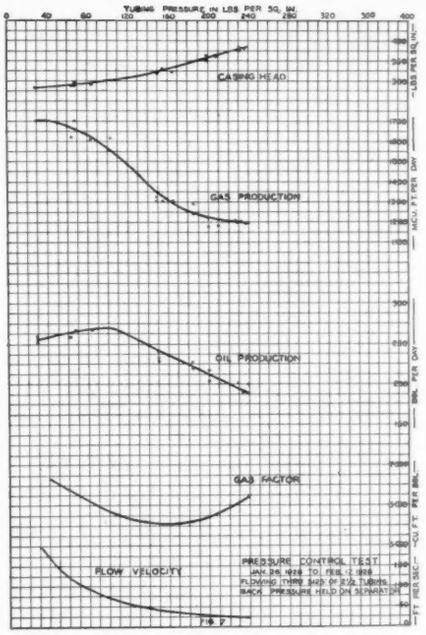

FIGURE 7

submergence and by changing the rate or period of pumping. Pumping packers have been used to decrease the bottom hole pressure on wells which cannot be pumped off. There is need for more data on pressure control of pumping wells, particularly on those producing from thick sands with low rock pressures.

Pressure Control of Water Encroachment

In the majority of flowing wells, approach of edge water is indicated by a sharp rise in flow temperature and a tendency for the natural gas factor to decrease spontaneously. Allowances must be made in the interpretation of flowing temperatures for changes in temperature of input gas on gas-lift wells. Changes in back pressure also change temperature readings due to gas expansion and must be discounted.

In cases where temperature or gas factors indicated the approach of water, the highest back pressures, permissible with low gas factors, have been held with ostensibly excellent results, as these wells did not go to water as fast as similar but uncontrolled wells. Results of this kind cannot be conclusive as there is no suitable basis for absolute comparison, but they are at least strongly indicative.

After wells start producing some water, the water-oil ratio often may be varied appreciably by pressure control. In one case a well which was swabbing 50 barrels of water with 600 barrels of oil was placed on the gas-lift and the water entirely eliminated for 23 days, even though the oil production was increased to 700 barrels per day. In many cases the water-oil ratio has been decreased materially and held down through control of bottom hole pressures by changing submergence or outlet pressures.

Figure 9 presents the pressure control test of a naturally flowing well which was making water. It is noted that although the rate of water production was de-

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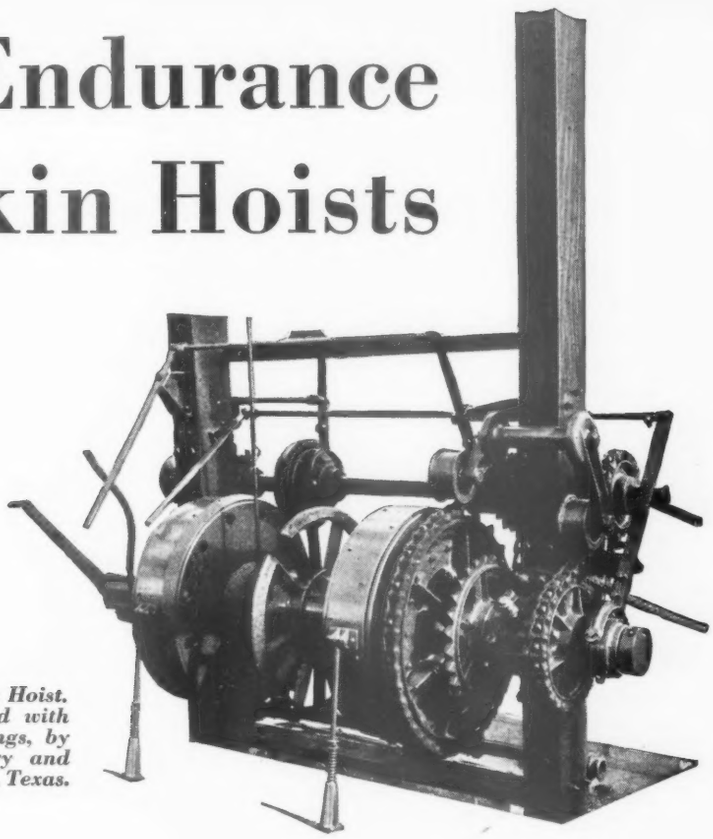
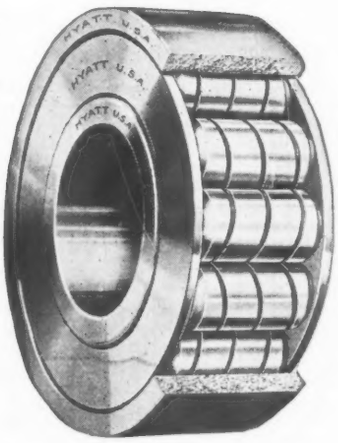
Hyatt Endurance in Lufkin Hoists



New No. 52 Lufkin Hoist. Built, and equipped with Hyatt Roller Bearings, by the Lufkin Foundry and Machine Co., Lufkin, Texas.

WHEN anti-friction bearings were considered for the new No. 52 Lufkin Hoist, illustrated, Hyatt stamina and economy convinced Lufkin engineers that the Hyattway was the right way to insure permanent operating satisfaction for this sturdy new unit.



Hyatt Roller Bearing with outer race cut away to show roller construction.

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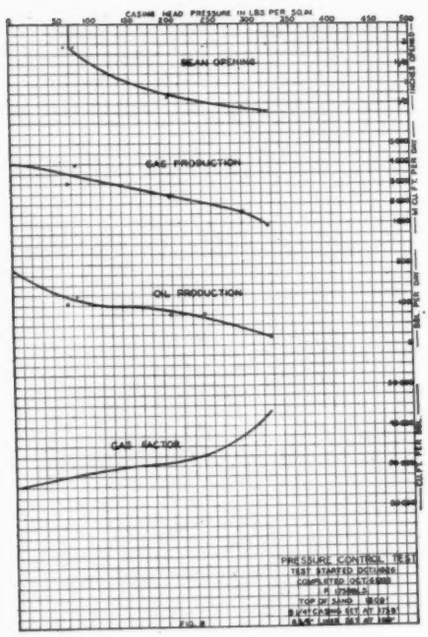

FIGURE 8

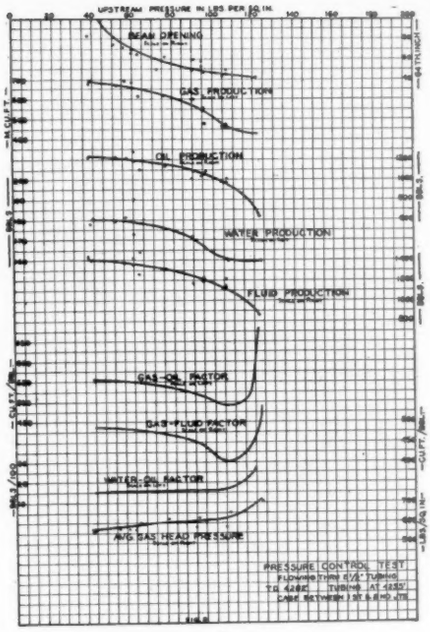

FIGURE 9

creased by back pressure, the water-oil factor was increased. The change in rate of increase of this water-oil factor closely correlates with the point of minimum gas factor. It has been found that in most cases, the points of minimum factors roughly coincide so that a decision is not often required as to whether a well should be produced with a minimum gas-oil factor or a minimum water-oil factor.

Methods of Controlling Sand Troubles

Wells making excessive amounts of sand can often be handled economically by increasing flow velocities to a point where the sand can be removed. The use of gas-lift has been most satisfactory for this purpose as high velocities can be obtained without necessity of serious alteration in pressure conditions.

A method of cleaning out flowing wells by circulation has been found to be adaptable where periodic formation caving is encountered. Water was lubricated into the input gas in slugs of two barrels each. This water caused emulsions to form in the bottom of the hole. The viscosity and density of the emulsions were such that they removed the cavings from the hole. Figure 10 in the production and control data for the later life of the well shown in Figure 1. Early in February the accumulation of cavings in the hole caused the input pressure to rapidly increase with a corresponding decrease in oil production. Heat generating chemicals were lubricated into the input gas as the well appeared to be chocked with paraffin. Successful results were obtained with the chemical as the pressure immediately returned to normal. After two more similar treatments it was found that the water introduced with the chemical was alone responsible for the benefits obtained and in successive cases water only was used. The use of this method avoided an expensive and detrimental cleaning out job and is believed to have prolonged the gas-lift life of the well by at least six months, as the well is still producing approximately 400 barrels per day on gas-lift.

Breaking Out Pressures

It has been found that in many cases uninterrupted operation is essential to long life on gas-lift. Wells which have been frequently shut down and started with high pressures have not given results equal to those which were kept in continuous operation. Wells may be permanently injured by high starting pressures. Unloading with a swab or breaking out by stages is recommended for use in cases where this danger exists, as a few hours extra production will not compensate for the possible damages.

Effects of Outlet Pressure Upon the Flow Column and Subsequent Bottom Hole Pressures

Some of the data taken within the course of operation and testing of wells has supplied some interesting indications of what happens within a well when pressure is applied at the outlet. Conclusive evidence has been obtained regarding the presence of working fluid levels in wells with low gross gas factors. In these wells there is a constant column of oil in the hole through which the gas bubbles and

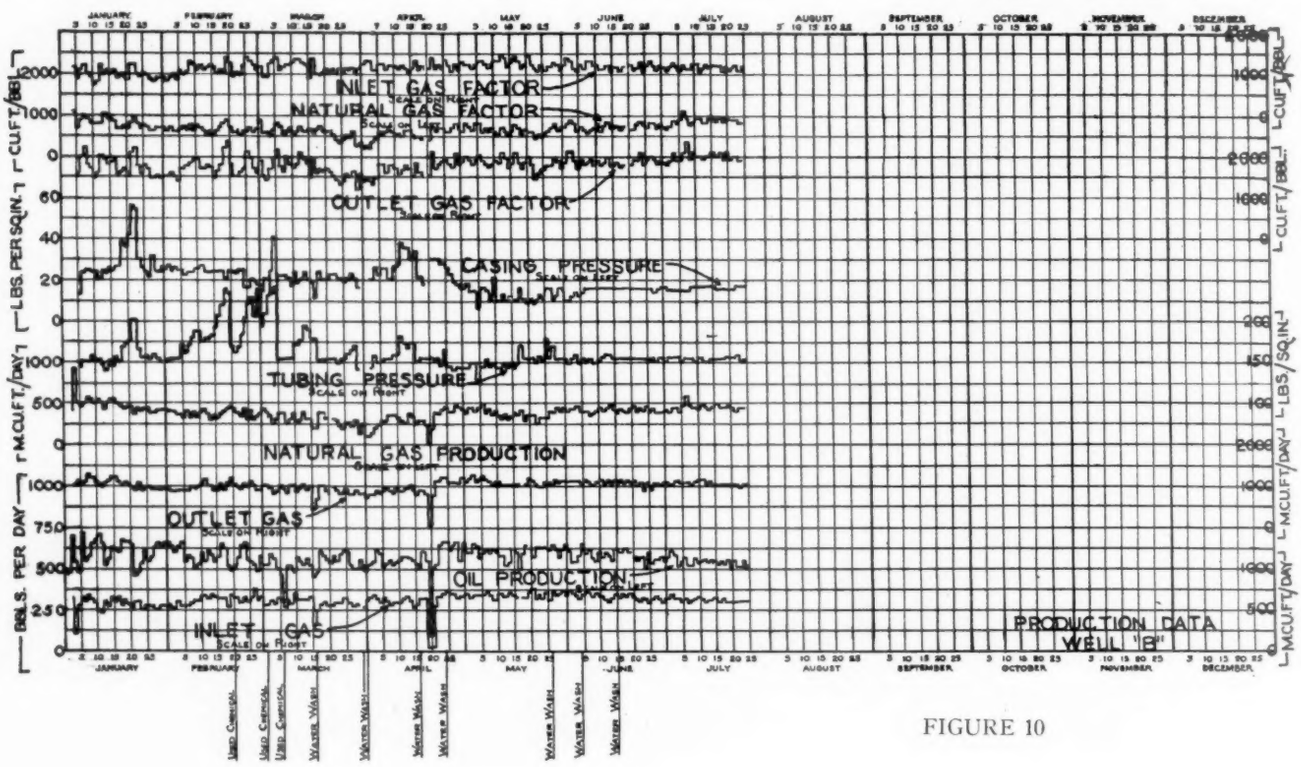

FIGURE 10

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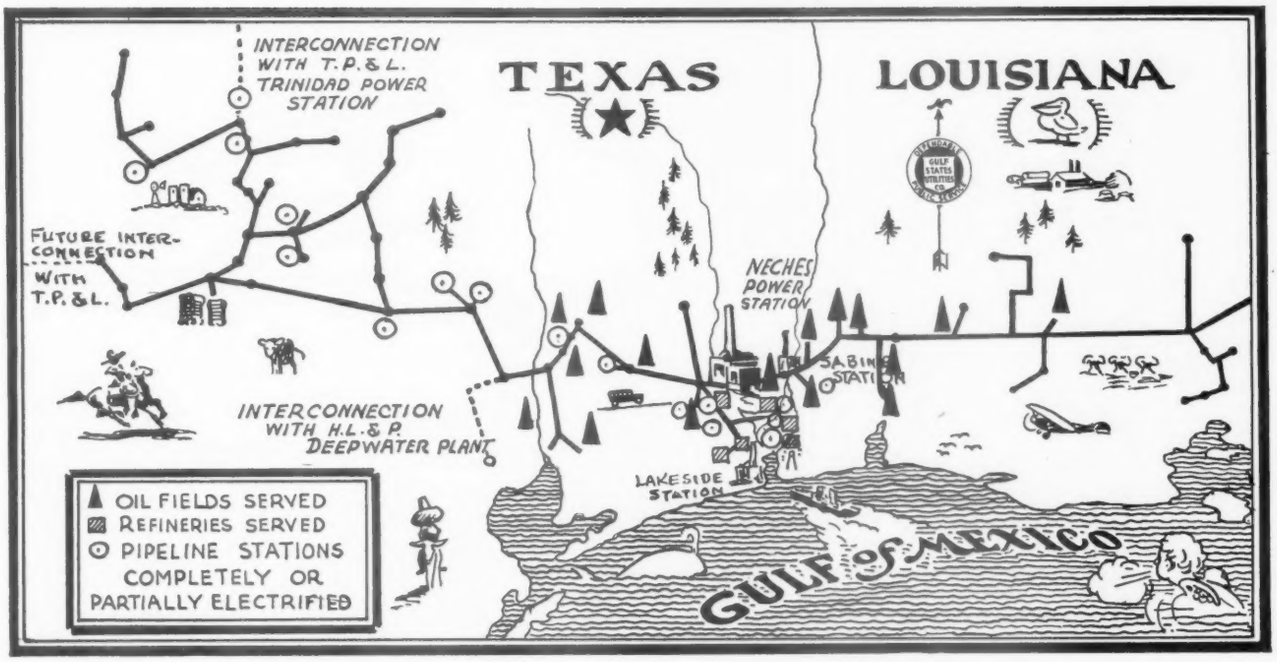
ELECTRIC POWER PREFERRED



The use of Central Station Electric Power has steadily increased and a number of extensions to the present system are planned to serve the industry even more completely in this territory.

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Gulf States Utilities Company

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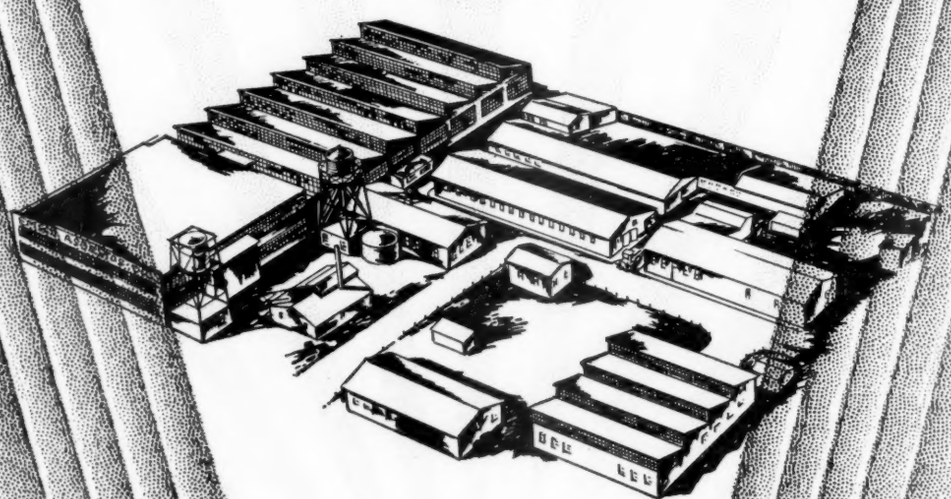
No. 2—of a series on the history and development of the giant chain of EMSCO organizations.

EMSCO AIRCRAFT CORPORATION factory now under construction on a site of 75 acres located in the hub of the great Southern California Metropolitan Area.

EMSCO



EMSCO AIRCRAFT CORPORATION
DOWNEY, CALIFORNIA

★ACHIEVEMENT (Noun) A noteworthy and successful action or a distinguished feat. (Heraldry) An escutcheon.

Say you saw it in The OIL WEEKLY

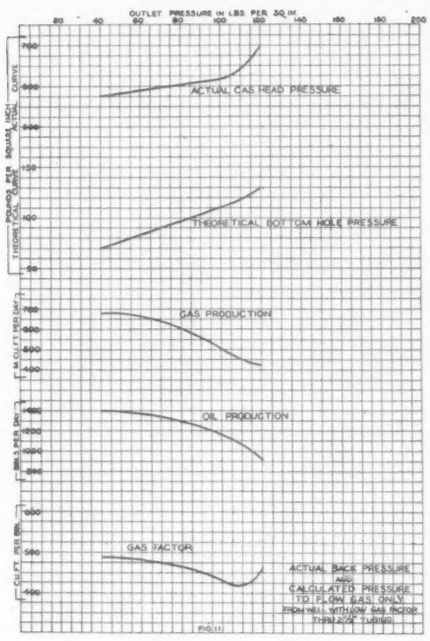

OUTLET PRESSURE IN LBS PER SQ.IN.
ACTUAL CAS HEAD PRESSURE
THEORETICAL BOTTOM HOLE PRESSURE
GAS PRODUCTION
OIL PRODUCTION
GAS FACTOR
ACTUAL BACK PRESSURE AND CALCULATED PRESSURE TO FLOW GAS ONLY FROM WELL WITH LOW GAS FACTOR THRU 2" TUBING

FIGURE 11

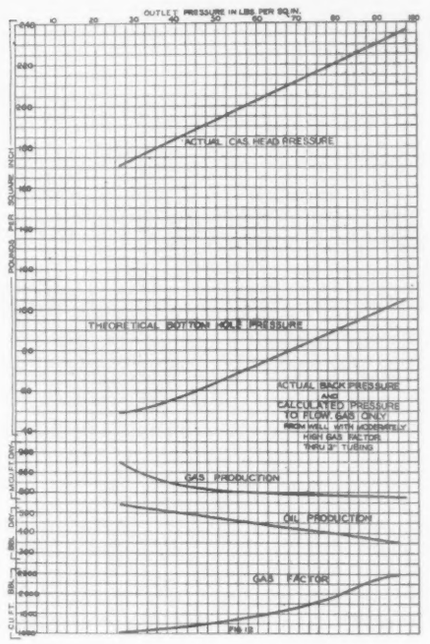

OUTLET PRESSURE IN LBS PER SQ.IN.
ACTUAL CAS HEAD PRESSURE
THEORETICAL BOTTOM HOLE PRESSURE
ACTUAL BACK PRESSURE AND CALCULATED PRESSURE TO FLOW GAS ONLY FROM WELL WITH MODERATELY HIGH GAS FACTOR THRU 3" TUBING
GAS PRODUCTION
OIL PRODUCTION
GAS FACTOR

FIGURE 12

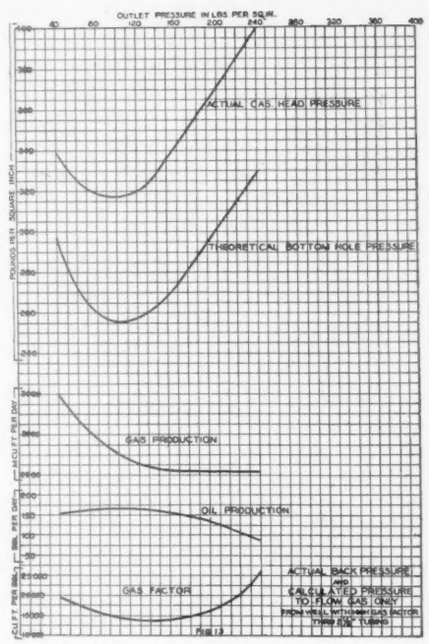

OUTLET PRESSURE IN LBS PER SQ.IN.
ACTUAL CAS HEAD PRESSURE
THEORETICAL BOTTOM HOLE PRESSURE
GAS PRODUCTION
OIL PRODUCTION
GAS FACTOR
ACTUAL BACK PRESSURE AND CALCULATED PRESSURE TO FLOW GAS ONLY FROM WELL WITH HIGH GAS FACTOR THRU 3" TUBING

FIGURE 13

from the top of which, the oil produced is picked up as a spray. In one well flowing 20 barrels per hour naturally with a gas factor of 550 cubic feet per barrel the pressure at a depth of 3200 feet was found to be 820 pounds while at a depth of 3600 feet it was over 950 pounds, a difference of 150 pounds per square inch for a 400-foot column of fluid. When the fluid column was lightened by the circulation of gas the pressure at 3200 feet was only 300 pounds, although the oil production increased to 30 barrels per hour.

The working fluid level may be raised or lowered by changing the velocity of flow. In this case the bottom hole pressure is not affected directly by the outlet pressure, but is affected by the flow slippage due to velocity which is controlled by the outlet pressure. This slippage affects the height of fluid level which automatically regulates bottom hole pressure to the point where an amount of oil, capable of being lifted at a corresponding velocity, is produced. An example of this case is shown by Figure 11 which shows a comparison of casing head pressure used as an index to the trend of bottom hole pressure, and the calculated pressure required to flow the gas only. Above approximately 100 pounds outlet pressure, the casing head pressure increases rapidly while an enlarged scale is necessary to notice the difference in trend of theoretical pressure. It is thought that slippage was obtained at about 100 pounds outlet pressure where the well head velocity was approximately 26 feet per second and the bottom hole velocity approximately 6.5 feet per second.

Figure 12 and Figure 13 are data on wells with higher gas factors and velocities, plotted similarly to that of Figure 11. The trend of the theoretical and actual pressures are almost identical on each of these wells which would indicate that no working fluid level is present.

Figure 13 is particularly interesting in that it shows a case in which a decrease in bottom hole pressure gave a decrease in gas production. This is thought to have been caused by oil blocking off gas passages in the sand following the pressure change.

A study of flow velocities has indicated a hyperbolic relationship between the velocity at the well head corresponding with the point of slippage and the gas-oil ratio calculated at the absolute pressure in the well outlet. The numerical values of the curves vary with different sizes and depth of tubing, outlet pressure and gravity of gas and oil.

From the mass of flow data now being accumulated in the Mid-Continent, empirical curves could be compiled on slippage velocities and pressure drops for the vertical flow of oil-gas mixtures in pipes. Such a set of curves would be of great economic value to the industry, as an aid to lower operating costs and higher oil recovery.

Summary and Conclusions

1. Pressure control does not always necessitate reducing the daily rate of or the deferring of production. Gas energy can be conserved without the cooperation of offset operators, by intelligent control, but more uniform and better results are secured with cooperation.

2. When control is applied during the flush period, oil production deferred by pressure control, is returned within the early life of the well.

3. The minimum gas factor coincides so closely with the most economic gas factor, that in the majority of cases, no practical distinction can be made.

4. The design of connections, at the top of the well, influences the results obtainable. All flow line bends should have the convex side upward.

5. Gas-lift is the most flexible method of pressure control.

6. The suitability of an installed string of flow tubing can be determined accurately by test methods.

7. Tests can be readily conducted to determine the proper pressure adjustments.

8. After a well is properly adjusted, few subsequent adjustments are necessary until the method of operation is changed.

9. Well cannot be pinched indiscriminately to any desired rate of production without danger of dissipating gas energy.

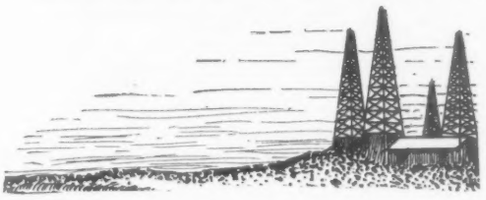
10. Water-oil factors may be controlled in the same manner as gas-oil factors.

11. Sand troubles may be alleviated considerably by gas-lift control and water circulation.

12. The relation of outlet back pressure to bottom hole pressure is not direct, except in wells with high gas factors and high flow velocities.

13. Working fluid levels control the bottom hole pressure on wells with low gas factors and low flow velocities.

14. Continuous and steady operation of the average well is thought to be insurance against a short and uneconomical producing life.



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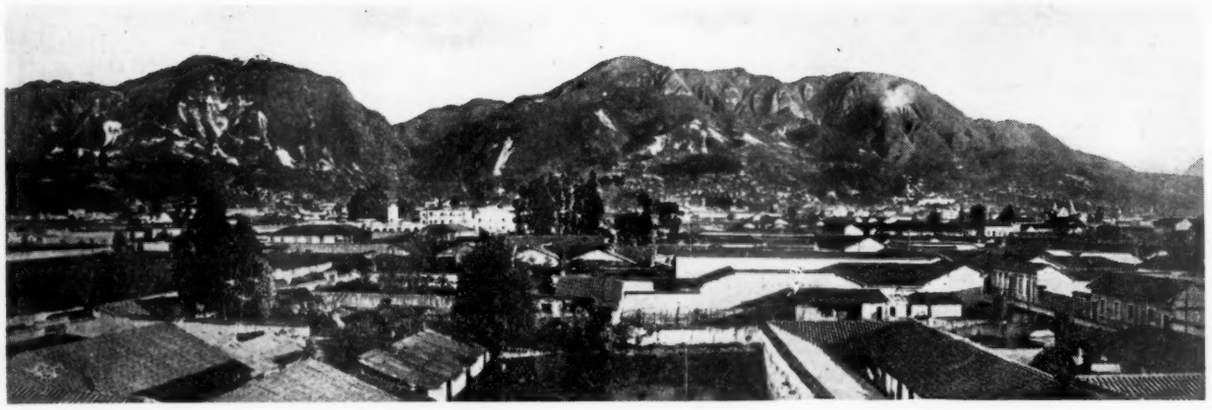

Sky line of Bogota, Capital of Colombia. Photo by Scadta, Bogota

Colombia Less Hostile Toward Outside Interests

Indicated, following session of International Advisory Commission, that new petroleum law will be less drastic than previously indicated

By ROY E. LEIGH
Special Foreign Representative

BOGOTA, Colombia, May 14. — (By mail). — A general exodus of oil men is occurring following completion May 13 of the deliberations of the international advisory commission which convened in Bogota early in April. Sir Thomas Holland, the British expert, boarded a Scadta plane at Girardot May 14 en route to Barranquilla and Puerto Colombia, where he will take ship for London. J. W. Steele, supervisor of the Rocky Mountain branch of the petroleum conservation division of the United States geological survey, who assisted H. Foster Bain, the American member of the commission, left with Mrs. Steele today en route by train and automobile (and perhaps by mule) to Buenaventra, Colombia's Pacific port, from which point he has engaged passage via the Panama Canal. Recent rains have caused several serious landslides along the route which the Steele party will travel.

Sir Thomas H. Holland, British expert, recently elected vice-chancellor of Edinburg University

Dr. Aurel Ianculesco, general secretary of the commission which recently revised and modified the petroleum law of Roumania, now serving as a member of the International Advisory Commission at Bogota

Bain and Mrs. Bain expected to leave Bogota' for New York about May 28. Jose Amador Ibarra, another member of the American contingent, will accompany them to Colon, C. Z., from which port he will proceed to Tampico to assume a position with Huasteca Petroleum Company as petroleum engineer. Ibarra is a recent graduate of the University of Oklahoma.

Dr. H. Foster Bain, secretary of the American Institute of Mining and Metallurgical Engineers, and former director of the United States Geological Survey, the American member of the International Advisory Commission at Bogota

Santiago Gonzalez Cordero, the Mexican adviser, has expressed his intention of remaining on the ground to advise individual congressmen when they meet in July to consider the matter of a new petroleum law. Aurel Ianculesco, the Roumanian expert on petroleum legislation, probably will remain here for some time also.

Captain J. W. Flanagan, president of the Andian National Corporation, Ltd., accompanied by John Paul Jones, his private secretary, left Girardot on yesterday in an Andian hydroplane en route via Barranca Bermeja to Cartagena and thence to their headquarters at Toronto, Canada. The Andian party has been in Bogota' for several weeks.

M. C. Anderson, of the New York executive offices of South American Gulf Oil Company, is remaining in Bogota' for the time being.

Roy Leigh, foreign representative of *The* OIL WEEKLY, left Bogota' today en route Girardot, from which point he expects to fly to Barranca Bermeja and thence by plane to Barranquilla, Cartagena, and Buenaventura to the Santa Elena field, in Ecuador, from which point he will continue on his tour of the South American continent.

Sr. Santiago Gonzalez Cordero, subchief of the Petroleum Section of the Mexican Department of Industries, the Mexican member of the International Advisory Commission at Bogota

J. W. Steele, supervisor of the Rocky Mountain branch of the Petroleum Conservation division of the United States Geological Survey, who is assisting Dr. Bain in the Bogota conference

During the first few weeks of the commission's deliberations, it appeared to local observers that its efforts might come to naught. This opinion was based on the fact that each of the foreign experts was requested by the Minister of Industries to perform, in secret, a sort of autopsy on the Montalvo bill of 1928, which failed of en-

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enactment of which sought to provide for the nationalization of the Colombia subsoil, and for its development by semi-official exploration companies, as described in a previous issue of *The* OIL WEEKLY. During the first phase of the commission's activities, each member worked alone and, presumably, there was no exchange of ideas. Interviews granted by the Mexican and Roumanian members gave rise to the belief that the radical project of last year would merely be rehashed and offered again to the National Congress which convenes in July.

However, Dr. Jose' Antonio Montalvo, minister of industries, called the commission into parliamentary session at the beginning of last week; and, with the advice and assistance of various officials and experts of the *Ministerio de Industries* and the *Oficina Nacional de Mines,* a sincere and sustained effort was made to iron out differences of opinion and to draft an outline of a sound and workable petroleum law. To say that the Colombian people, or rather the governmental officials, have had a change of heart would aptly describe the situation. True, that change, which probably climaxed during the last fortnight, is but the culmination of a movement or a tendency which began about a year ago when the more sober-minded people of the country began to realize that hostile legislation had brought the development of their petroleum resources to a standstill.

Jose Amador Ibarra, petroleum engineer, Hausteca Petroleum Company, who served as interpreter and assistant to Dr. H. Foster Bain

Findings of the advisory commission are being kept secret for the time being; but it is generally understood that the new bill will be less hostile toward foreign enterprise than any of its predecessors during recent years. One of the governmental officials who was a regular attendant of the meetings expressed to our representative an opinion to the effect that the new bill will encourage foreign capital to participate in the development of Colombia's petroleum resources; and that the proposal for the organization of semi-official producing, pipe line, and refining companies has definitely been abandoned. Others who attended the secret meetings of the advisory body describe the present frame of mind of Montalvo as being entirely reasonable and say that he appears to be making a sincere and determined effort to find a sound solution of his country's petroleum problem.

C. S. T. Folsom, attorney representing South American Gulf Oil Company at Bogota

Colombian Policy

We are indebted to Luis A. Sarmiento, editor of the *Boletin de Minas y Petroleo,* official organ of the department of mines and petroleum for the following statement regarding the present attitude of Colombian officialdom concerning the question of petroleum legislation. This statement is important, as coming from an official who attended all of the sessions in which the new bill was drafted. Furthermore, our representative understands that it has the approval of Montalvo, minister of industries, whose duty it will be to present the new law to the congress.

(*Translation*)

"Bogota', Colombia,
May 13, 1929.

"Esteemed Mr. Leigh:

"I have much pleasure in answering the questions which you have asked respecting the petroleum policy in Columbia, with the ultimate object of informing the American public through the medium of your responsible and efficient magazine, *The* OIL WEEKLY."

Question No. 1.—As you interpret the attitude of the Colombian government and the Colombian people, is it friendly toward foreign capital? Toward American capital?

Answer. — "Yes; amply, judging by what has occurred and what is actually occuring. The fundamental law of the country, that is, the Constitution of 1886, guarantees to foreigners equal treatment as meted to Colombians. In practice, I can assure you, that foreign capital is always welcome. Many prefer American capital, because it is more generous and less timid than European. Not only do the Colombians receive in friendly attitude foreign capital, but they wish that it will come and collaborate in the development of the country. Naturally, the Colombians, owners as they are of the country, have the right to aspire at not being excluded in the direct benefits of that development."

Question No. 2.—Do you believe that foreign capital will be necessary, or desirable, in the development of your country's petroleum resources?

Answer.—"Absolutely necessary; even more—indispensible. In Colombia there is not sufficient capital for development on a large scale. Nor does there exist the technical knowledge necessary. Naturally, the Colombians aspire to initiate themselves gradually in the petroleum industry. Actually, there already exist a few responsible organizations constituted with Colombian capital, as the *Union Colombiana de Petroleos,* ready to operate just as soon as the oil law is passed. Principally, one section of the country, Antioquia, is very capable of taking advantage of the lessons of foreigners with reference to petroleum. Antioquia has always been essentially a department noted for its mining. By tradition and by temperament it is capable of launching itself with success in petroleum explorations.

R. I. Dodson, newly appointed manager of the Andian National Corporation's executive offices at Bogota

On one hand, the Colombians are convinced that it is necessary to open frankly the door to foreign capital in order that it can operate with success in the country. On the other hand, they are also convinced that their petroleum wealth will not benefit them truly and wholly except when they learn to exploit it themselves. This is impossible of attainment for a long time, but they will try to harmonize the necessity of opening the door with the legitimate national desire of direct benefits."

Question No. 3.—Do you believe that a new petroleum bill will be drafted and completed in time for presentation to the next congress? What steps have been taken, and what progress has been made in that direction?

M. C. Anderson, special foreign agent of the Gulf Oil Corporation, who is now in Bogota observing developments in connection with drafting of a new petroleum law in Colombia

Answer.—"Yes, I believe it firmly. During the last year, the minister of industries, Montalvo, and the department of mines and petroleum, which works under his direction, have been taking the necessary measures for the rapid formulation of a petroleum law. Primarily, there was opened an inquiry among 18 notable personalities of the country concerning the petroleum problem from its legal, international and national, commercial and technical aspects. The persons interrogated have now answered the questionnaire, which, above all, has produced a very favorable impression in the country. The government has contracted the services of four foreign experts that they might complement the ministry in the formulation of the project of law. It has been over one month since these experts arrived in the country, where they have worked intensively, each one presenting a separate report. After presentation of these reports, the minister of industries has held earnest conferences with said experts, with the ultimate object of arriving at an agreement upon the bases which will serve for the formulation of this project of law. At the moment in

(Continued on page 61)

Captain J. W. Flanagan, president of the Andian National Corporation, Ltd., who is now en route his headquarters at Toronto after an extended sojourn in Colombia

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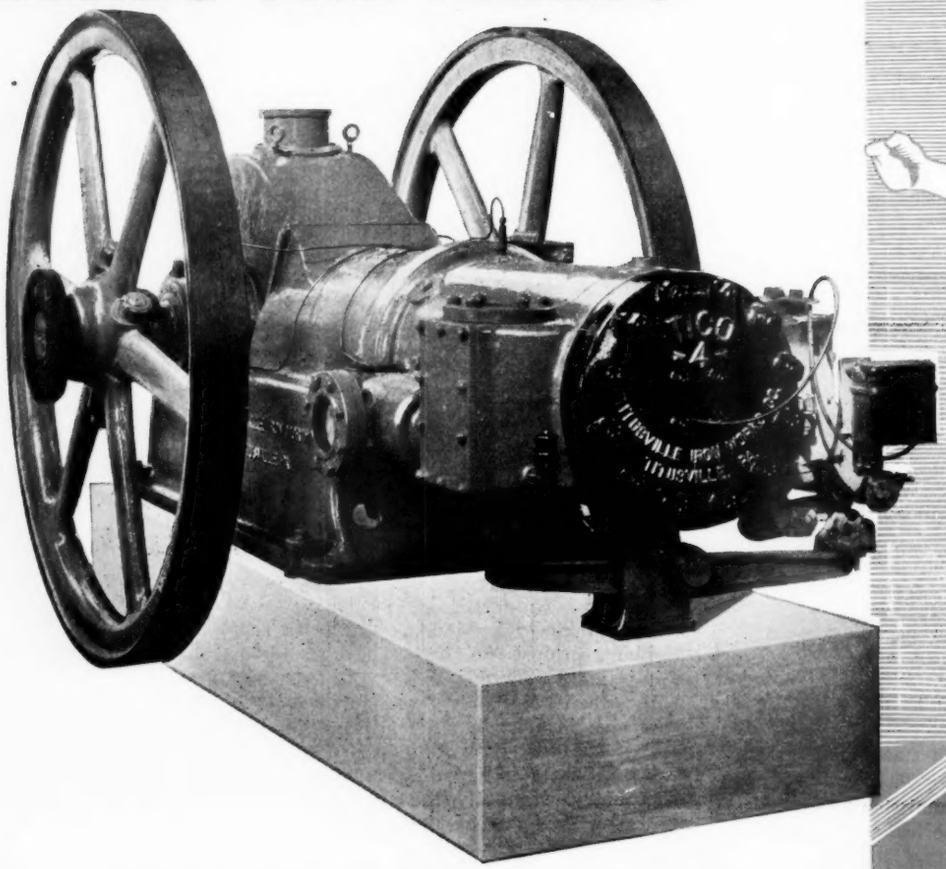

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Say you saw it in The OIL WEEKLY

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Santa Fe Springs Boosts National Production to New Peak

EVEN though the demand for crude in the Mid-Continent and West Texas areas is causing heavy withdrawals from stocks, and production in Oklahoma fails to meet anticipated schedules, the national daily average crude production for the week ended June 1 reached a new peak of 2,711,650 barrels. This was a gain of 21,300 barrels, practically all of which is credited to Santa Fe Springs, California.

Recent developments in California give unmistakable evidence that this state represents the chief deterrent to anticipated improvement in the crude supply situation. The fact that production in the Santa Fe Springs field continues to mount, in the face of alleged efforts at curtailment, proves conclusively that some drastic action must be taken immediately to correct this most unfavorable situation. At any rate the facts show that proration is not accomplishing a great deal in California and it is up to the industry in that state to prove by deed rather than by gesture that the curtailment program is not really a total failure.

There was practically no change in production east of the Rocky Mountains last week, the only gains reported being in Kansas, Texas and Eastern States. Oklahoma and the Gulf Coast area registered declines of 4300 and 4100 barrels, respectively. Of primary importance to the industry at this time is the fact that Oklahoma is "wide open" and continues to fail to even approach the prescribed limits of 725,000 barrels. This, coupled with the fact that the unusually large demand is making it necessary to withdraw crude from storage in Oklahoma and Kansas at a rapid rate, is creating the impression among Mid-Continent operators that another advance in crude prices will be announced in the near future.

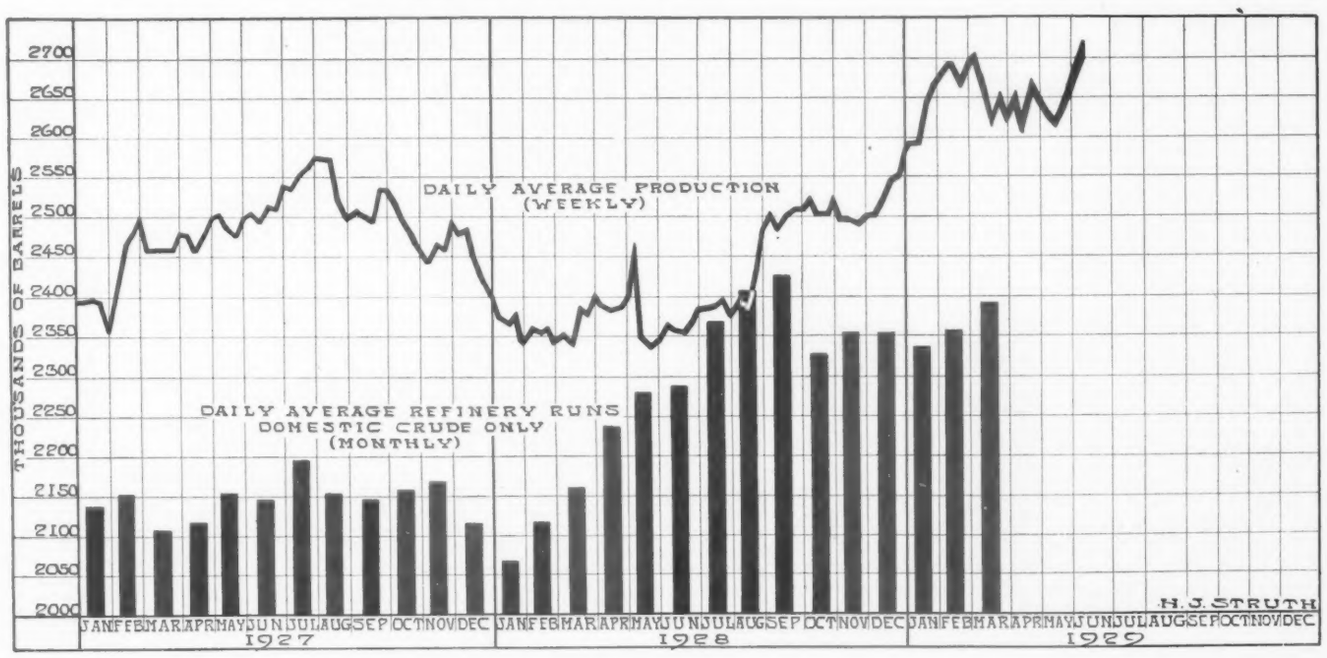
Increased demand from the Middle

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH AVERAGE OF 1928

	Daily Av'ge Year 1928 (Bureau of Mines Data)	Daily Av'ge June 1, 1929 (A. P. I. Wkly Prod. Rept.)	Excess
Oklahoma-Kansas	786,585	805,000	18,415
Texas-Louisiana-Arkansas	849,205	926,400	77,195
California	633,831	790,200	156,369
Balance of United States	190,391	190,050	[1]341
Total United States	2,460,012	2,711,650	251,638
Mexico-Central and South America	561,339	609,249[2]	47,910
Grand total	3,021,351	3,320,899	299,548

[1]Bold figures indicate below 1928 average.
[2]As of March 30, 1929—latest date available.

DOMESTIC PRODUCTION AND REFINERY RUNS


THOUSANDS OF BARRELS
2700
2650
2600
2550
2500
2450
2400
2350
2300
2250
2200
2150
2100
2050
2000
DAILY AVERAGE PRODUCTION (WEEKLY)
DAILY AVERAGE REFINERY RUNS DOMESTIC CRUDE ONLY (MONTHLY)
H. J. STRUTH
J A N F E B M A R A P R M A Y J U N J U L A U G S E P O C T N O V D E C J A N F E B M A R A P R M A Y J U N J U L A U G S E P O C T N O V D E C J A N F E B M A R A P R M A Y J U N J U L A U G S E P O C T N O V D E C
1927
1928
1929

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West territory is causing more crude to be sent through the trunk lines to that area and at the same time refiners in Group 3 territory are increasing their runs to stills. These conditions are rapidly cutting into stored supplies of crude that is expected soon to reach a rate of 100,000 barrels a day. Since most of this oil was stored at or near present prices, the major companies are expected to raise the price in order to clear themselves of their storage investment and afford them a profit on their stored oil. While this situation is a local one, it is nevertheless of national importance to the industry, particularly since an additional increase in crude prices is bound to complicate matters further.

Production Excess

Compared with last year's daily average, crude production excess is now 251,638 barrels daily. Of this amount, 156,369 barrels represents the excess contributed by California, which continues to grow larger each week. While there has been somewhat of a gain in the excess attributed to Texas, Louisiana and Arkansas, it is a well known fact that conditions in West Texas are making it rather difficult for crude buyers to satisfy their requirements. On the other hand, the situation in California is constantly growing worse, since stocks on the Pacific Coast are increasing at a rapid rate. During April, the Bureau of Mines figures show that California light oil stocks increased nearly 2,500,000 barrels, while heavy oil stocks showed practically no change from the preceding month. Compared with April of last year, stocks of light oil in California are nearly 8,000,000 barrels greater. These facts indicate the seriousness of the supply situation in California and make it apparent that this unfavorable influence will sooner or later be felt throughout the United States unless something is done to stem the flow of flush production, particularly at Santa Fe Springs.

Too Much Optimism

Unfortunately, the recent crude price advances were carried too far and have resulted in more optimism than is justified at this time. While the financial outlook for this year appears even better than last year, it is apparent that whatever progress was made in curtailment of crude production has been entirely eradicated by the recent market advances. Undoubtedly the optimism prevailing in the Mid-Continent area has had a phychological effect upon California operators that accounts for the apparent laxity with which their situation is being handled. It is not difficult to realize the beneficial effect that California could exert upon the general crude situation if proration effort was fully realized as previously anticipated.

As a matter of fact, if California could have maintained the downward trend manifested at an earlier date, in combination with the decidedly improved outlook in Oklahoma and West Texas, there is no doubt that the industry would now be in the midst of the most stabilized period of its existence. Such a condition would have warranted a rising crude market and a wave of prosperity such as has never before been realized. However, premature optimism and price-raising has beclouded the oil horizon sufficiently to obscure the benefits that were anticipated previously.

Obviously, until the daily average production curve manifests a definite downward trend, there is little or no opportunity for further improvement in the supply situation. A look ahead suggests the possibility that the crude price structure may even crumble toward the close of this year, as a result of excessive above-ground supplies. Whether the present crude price structure can be maintained throughout this year depends primarily

Seven Governors to Participate In Conservation Parley

WASHINGTON. — Mark L. Requa will preside as chairman of the oil conference called by President Hoover to convene at Colorado Springs June 10. Mr. Requa accepted an invitation wired by Secretary of Interior Ray Luman Wilbur May 28, and has taken the oath of government to act on that occasion as the government representative.

Mr. Requa is a mining engineer, a retired oil operator and was director general of the oil division of the United States Fuel Administration during the World War. His past few months have been spent in furthering the cause of conservation in California.

Secretary Wilbur explained last week that while this conference is called by the president and is to be attended by officials of the Federal Oil Conservation Board, Department of the Interior, operators from leading oil producing states, the meeting will be of a preliminary nature and would have no authority to write a binding contract. Any action the meeting might take would be in the nature of a recommendation. If specific results should grow out of the meeting, the secretary explains, they would have to develop step by step. As a result of its deliberations state legislatures might take action leading to uniform legislation and the acceptance of an oil conservation compact subject to the final approval of congress.

Acceptances have been made by seven governors to attend the conference, including the governors of New Mexico, Kansas, Wyoming, Calofirnia, Colorado, Oklahoma and Texas, each of which will probably head a delegation.

The Oil Conservation Board will be represented at the conference by Secretary Wilbur, chairman; Dr. George Otis Smith, director of the geological survey and chairman of the board of technical advisors of the Federal Oil Conservation Board; and Edward S. Rochester, secretary of the board.

Details on Critical Fields

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	578	3,057,200	5,289	588	144,530	245[1]	3	19
Church & Fields	189	293,465	1,077	187	25,155	135	1	.
Gulf-McElroy	73	57,075	782	73	12,685	174	.	3
Yates	312	2,051,750	6,576	307	104,005	339[1]	2	7
Totals	1,152	5,369,490	4,661	1,155	286,365	248	6	29
CALIFORNIA—								
Santa Fe Springs[2]	280	692,562	3,329	125	199,161	1,510	22	200

[1]Production pinched.
[2]Includes deep zone production. For field total add 215 wells and 24,500 bbls.

upon California's ability to control flush production.

North Texas

North Texas plant owners are experiencing difficulty in maintaining the nine cent quotation on U. S. Motor gasoline since the influence of the recent crude price advances has worn off, and a number of plants are seeking new business at one-eighth to a quarter of a cent below the above high mark for the year in order to keep shipments apace with production. Gasoline sales made immediately after the posting of the crude advances for June delivery have enabled refiners to keep stocks from piling up very rapidly, while an average boost of five cents per barrel on all grades of fuel oils lately has been accompanied by a fairly active fuel market. Independent refining units in the West Texas district are operating on a narrower margin with the gravity scale of prices in effect on all grades of oil. They are making an effort to bring their quotations on refined products up to a more equal level with those being quoted in the Mid-Continent.

Limited Crude Supply

In addition to their price troubles a number of the West Texas plants are confronted with a limited crude supply, while a trio of plants at Pyote are being forced to invade the open market with premiums from the bulk of their future crude supply by reason of Southern Crude Oil Purchasing Company's refusal to renew a ten thousand barrel daily crude contract.

A dime premium above posted prices is available for Winkler County operators that desire to supply the skimming plants at Pyote.

Subject to the final approval of the Texas Railroad Commission, a boost of 30,000 barrels is to be given Yates field effective July 1, thus giving this field a maximum output of 130,000 barrels daily. Yates field operators unanimously voted to increase the allowance at a meeting held in Fort Worth June 3, and recommendations were forwarded to the commission. Prospects of the increases being allowed are excellent, since both Shell Pipe Line Company and The Texas Pipe Line Company are anxious to purchase the full amount.

Panhandle Output Up

Revival of flush production in the Texas Panhandle, centering on the high gravity oil area in Gray County accounted for a boost of about 17,350 barrels on daily average production during the past week, with Gray County advancing to a new peak of 45,900 barrels daily. Crude produced in Gray County ranges from 40 to 44 gravity and is very attractive for its gasoline content. This new production is comparatively ephemeral, but is popular with both producers and purchasers.

Bureau of Mines Report Reflects Improvement

Washington.—The April report of the Bureau of Mines shows that while stocks of all oils increased over March, the rate of increase was considerably less, reflecting a decrease in crude production. During the month of April crude production aggregated 80,110,000 barrels, a daily average of 2,670,000 barrels. The total production for the month was 2,405,000 barrels less than in March, although the daily average represented a slight increase over that month. Of the three leading producing states, Oklahoma, showed a small increase in daily average production over March, but both Texas and California fell off slightly. Production in Kansas increased sharply as operations in the Sedgewick field made themselves felt. Another area of increased output was the Texas Gulf Coast, where considerable success has attended deeper drilling and extensions. Daily average production in Texas, exclusive of the Gulf Coast, fell off as the increase in output of the Salt Flat field was insufficient to balance the decline in West Texas. Daily average production in the Appalachian district showed an increase for the fourth consecutive month.

Stocks of crude east of the California increased slightly over 1,000,000 barrels in April as compared with an increase of about 2,700,000 barrels in March. This increase took place entirely in refinery stocks since tank farm stocks decreased—the first since November 1928. Stocks of light oil in California continued to increase, but stocks of heavy oil and fuel oil fell off slightly. Stocks of all oils increased 6,087,000 barrels during April and reached a new high level of 649,617,000 barrels. Over half of the April increase in these stocks was recorded in gas and fuel oil stocks east of California.

Following is the Bureau of Mines' analysis of supply and demand for the month of April:

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke, and asphalt in thousands of barrels of 42 U. S. gallons)

	April 1929	March 1929[1]	April 1928	Jan.-Apr. 1929	Jan.-Apr. 1928
NEW SUPPLY:					
Domestic production: Crude petroleum:					
Light	71,799	73,713	64,796	288,057	255,882
Heavy	8,311	8,802	7,331	32,230	31,938
Total crude	80,110	82,515	72,127	320,297	287,820
Natural gasoline	4,264	4,324	3,467	16,307	13,667
Benzol	255	264	229	1,002	910
Total production	84,629	87,103	75,823	337,606	302,397
Daily average	2,821	2,810	2,527	2,813	2,499
Imports:					
Crude	7,828	6,790	5,661	29,709	24,687
Refined	2,634	1,489	1,680	5,915	5,034
Total new supply all oils	95,091	95,382	83,164	373,230	332,118
Daily average	3,170	3,077	2,772	3,110	2,745
Increase in stocks all oils	6,087	9,467	2,963	36,134	26,284
DEMAND:					
Total demand	89,004	85,915	80,201	337,096	305,834
Daily average	2,967	2,771	2,673	2,809	2,528
Exports[2]:					
Crude	1,726	1,572	1,303	6,948	5,308
Refined	10,357	10,801	11,813	42,378	44,372
Domestic demand	76,921	73,542	67,085	287,770	256,154
Daily average	2,564	2,372	2,236	2,398	2,117
Excess of daily average domestic production over domestic demand	257	438	291	415	382
STOCKS (end of month):					
Crude petroleum:					
East of California[3]:					
Light	331,301	327,634	319,591	331,301	319,591
Heavy	49,405	52,025	52,307	49,405	52,307
California:					
Light	26,500	24,067	18,752	26,500	18,752
Heavy[4]	100,332	100,504	94,301	100,332	94,301
Total crude	507,538	504,230	484,951	507,538	484,951
Natural gasoline at plants	1,166	995	831	1,166	831
Refined products	140,913	138,305	130,109	140,913	130,109
GRAND TOTAL STOCKS ALL OILS	649,617	643,530	615,891	649,617	615,891
Days' supply[5]	219	232	230	231	244
Bunker oil (included above in domestic demand)	4,179	4,213	4,275	16,559	16,045

[1] Revised. [2] Includes shipments to Alaska, Hawaii, and Porto Rico. [3] Exclusive of producers' stocks. [4] Includes fuel oil. [5] Grand total stock all oils divided by daily average total demand.

XUM

CRUDE OIL PRICE QUOTATIONS

Revised June 4, 1929

CRUDE PRICE CHANGES

Effective May 29, Standard Oil Company of Louisiana posted increase of 10 cents a barrel for Belleview, La., crude making the new price $1.30 a barrel.

EASTERN STATES

(Effective March 12, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$4.10
Brandford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.35
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.75
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Keister (Pennsylvania)	1.20

CENTRAL STATES

(Effective May 21, 1929)

Posted by Ohio Oil Co.

Illinois	1.75
Indiana	1.57
Lima	1.80
Plymouth	1.28
Princeton	1.75
Waterloo	1.25
Wooster	1.90

MID-CONTINENT

(Effective May 21, 1929)

Magnolia Petroleum Company

Under 26	.70
26 to 26.9 gravity	.75
27 to 27.9 gravity	.85
28 to 28.9 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.05
31 to 31.9 gravity	1.15
32 to 32.9 gravity	1.25

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

MID-CONTINENT

(Effective May 20, 1929)

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company

25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

WESTERN KENTUCKY

All grades	1.83

PANHANDLE

(Effective May 20, 1929)

GRAY COUNTY

(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company.

Below 29 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.00
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.10
33 to 33.9 gravity	1.15
34 to 34.9 gravity	1.20
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.30
37 to 37.9 gravity	1.35
38 to 38.9 gravity	1.40
39 to 39.9 gravity	1.45
40 to 40.9 gravity	1.50
41 to 41.9 gravity	1.55
42 to 42.9 gravity	1.60
43 to 43.9 gravity	1.65
44 and above	1.70

WHEELER COUNTY

(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.90
30 to 30.9 gravity	.95
31 to 31.9 gravity	1.00
32 to 32.9 gravity	1.05
33 to 33.9 gravity	1.10
34 to 34.9 gravity	1.15
35 to 35.9 gravity	1.20
36 to 36.9 gravity	1.25
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.35
39 to 39.9 gravity	1.40
40 to 40.9 gravity	1.45
41 to 41.9 gravity	1.50
42 to 42.9 gravity	1.55
43 to 43.9 gravity	1.60
44 and above	1.65

CARSON-HUTCHINSON COUNTIES

(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.90
32 to 32.9 gravity	.95
33 to 33.9 gravity	1.00
34 to 34.9 gravity	1.05
35 to 35.9 gravity	1.10
36 to 36.9 gravity	1.15
37 to 37.9 gravity	1.20
38 to 38.9 gravity	1.25
39 to 39.9 gravity	1.30
40 to 40.9 gravity	1.35
41 to 41.9 gravity	1.40
42 to 42.9 gravity	1.45
43 to 43.9 gravity	1.50
44 and above	1.55

CALIFORNIA CRUDE OIL PRICES AT THE WELL

(EFFECTIVE JANUARY 18, 1929)

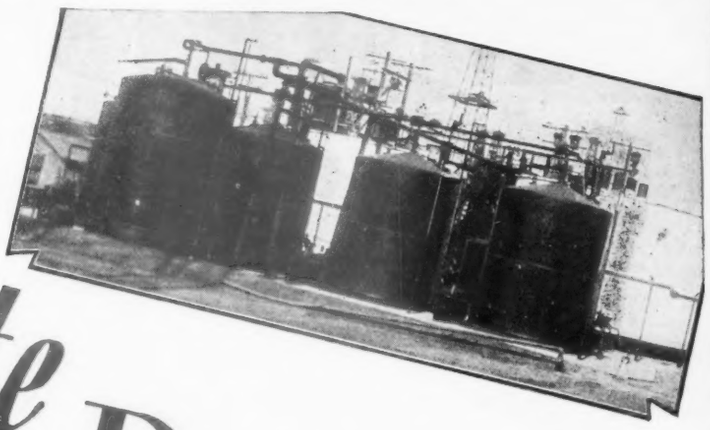
Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons infields indicated)

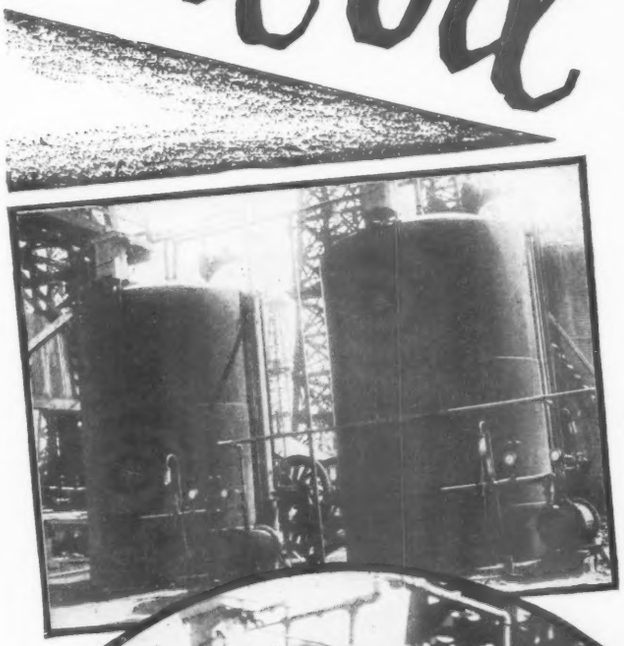
Gravity	Ventura *	Signal Hill	Alamitos Heights-Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood † Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elks Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .85	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .50	$ .50	$ .50	$ .50	$ .50	$ .50
15-15.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
16-16.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
17-17.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
18-18.9	.85	.75	.75	.75	.75	.75	..	..	.75	.75	.75	.70	.75	..	.50	.56	.56	.56	.56	.56
19-19.9	.85	.80	.80	.80	.80	.80	..	..	.80	.80	.80	.75	.80	..	.50	.62	.62	.62	.62	.62
20-20.9	.85	.85	.85	.85	.85	.85	..	..	.85	.85	.84	.80	.84	..	..	.68	.68	.68	.68	.68
21-21.9	.86	.89	.89	.89	.89	.89	..	..	.89	.89	.88	.85	.88	.89	..	.74	.74	.74	.74	.74
22-22.9	.87	.93	.93	.93	.93	.93	..	..	.93	.93	.91	.90	.91	.92	..	.80	.80	.80	.80	.80
23-23.9	.90	.97	.97	.97	.97	.97	..	..	.97	.97	..	.95	.94	.95	..	.85	.85	.85	.85	.85
24-24.9	.94	1.01	1.01	1.01	1.01	1.01	1.01	..	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	.98	1.05	1.05	1.05	1.05	1.05	1.05	..	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.02	1.09	1.09	1.09	1.09	1.09	1.09	..	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.06	1.13	1.13	1.13	1.13	1.13	1.13	..	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.10	1.17	1.17	1.17	1.17	1.17	1.17	..	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.14	1.21	1.21	1.21	..	1.21	1.21	..	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.18	1.25	1.25	1.25	..	1.25	1.25	..	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.23	1.30	1.30	1.30	..	..	1.30	..	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.0	1.28	1.35	1.35	1.35	..	..	1.35	..	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
32-32.9	..	..	..	..	..	..	1.41	..	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	..	1.47	1.16	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	..	1.53	1.22	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	..	1.59	1.28	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.65	1.34	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.71	1.40	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	1.77	1.46	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9	..	..	..	..	..	..	1.83	1.52	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	..	1.89	1.58	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	..	1.95	1.64	..	..	..	..	..	..	..	..	..	..	..	..

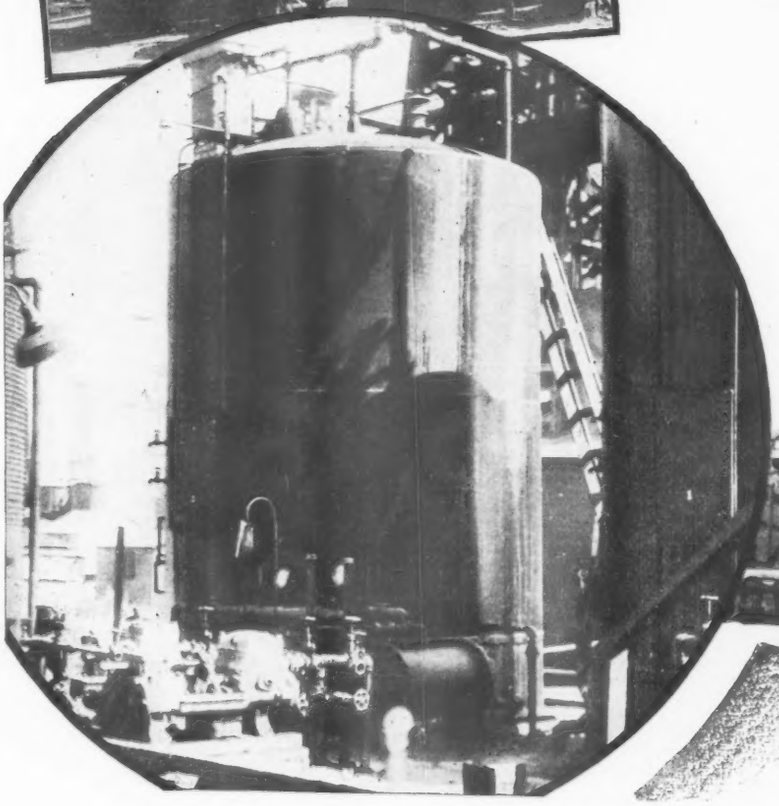
KETTLEMAN HILLS—55 degree Gravity and above $1.65 per barrel. *Union Oil Company. †Changed March 18, 1929.

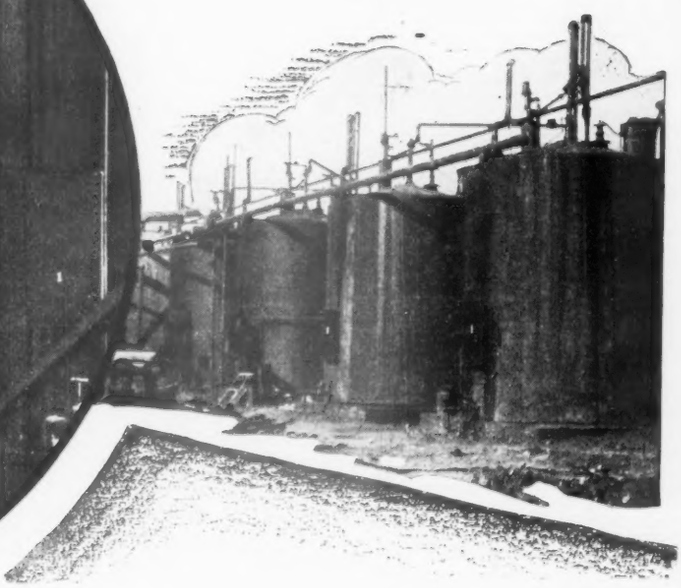
(See Next Page)

To Eliminate "cut oil" Problems









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XUM

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 42*)

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	.70
25 to 25.9 gravity	.74
26 to 26.9 gravity	.78
27 to 27.9 gravity	.82
28 to 28.9 gravity	.86
29 to 29.9 gravity	.90
30 to 30.9 gravity	.94
31 to 31.9 gravity	.98
32 to 32.9 gravity	1.02
33 to 33.9 gravity	1.06
34 to 34.9 gravity	1.10
35 to 35.9 gravity	1.14
36 and above	1.18

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.

MARKHAM
The Texas Company
(Effective May 20, 1929)

All grades	$1.00

LULING

All grades	.90

NORTH AND CENTRAL TEXAS
(Effective May 21, 1929)
Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company)

Below 25	.85
25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

SOUTH TEXAS

Mirando	.90
Salt Flat	1.25

GULF COAST
(Effective May 21, 1929)

Grade "A" all companies	1.30
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.18
26 to 26.9 gravity	1.21
27 to 27.9 gravity	1.24
28 to 28.9 gravity	1.27
29 to 29.9 gravity	1.30
30 to 30.9 gravity	1.33
31 to 31.9 gravity	1.36
32 to 32.9 gravity	1.39
33 to 33.9 gravity	1.42
34 to 34.9 gravity	1.45
35 to 35.9 gravity	1.48
36 to 36.9 gravity	1.51
37 to 37.9 gravity	1.54
38 to 38.9 gravity	1.57
39 to 39.9 gravity	1.60
40 and above	1.63

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

SOMERSET
Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

WYOMING-MONTANA
(Effective May 21, 1929)

Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.65
Grass Creek	1.65
Rock Creek	1.40
Lost Soldier	1.05
Lance Creek	1.68
Mule Creek	1.20
Notches	.65
Big Muddy	1.43
Osage	1.38
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.48
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA
(Effective May 24)

Sunburst	$1.75
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

Artesia	1.08
Hogback	1.43

CANADA
(Effective May 21, 1929)

Oil Springs	2.27
Petrolia	2.20

LOUISIANA-ARKANSAS
(Effective May 22, 1929
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company.)

27 to 27.9 gravity	$1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 gravity and above	1.85

*Shreveport-Eldorado's postings stop at above 40 gravity.

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS
(All Companies)

Below 28 gravity	.90
28 to 28.9 gravity	.94
29 to 29.9 gravity	.98
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.06
32 gravity and above	1.10

SMACKOVER
(All Companies)

Below 24 gravity	.85
24 and above	1.00
Bellevue	1.30
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Calion	.75

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS
American Petroleum Institute Figures (Barrels of 42 Gallons)

	Week Ended May 25	Week Ended May 18
AT ATLANTIC COAST PORTS—		
Baltimore	145,000	157,000
Boston	.....	.....
New York	80,000	263,000
Philadelphia	218,000	117,000
Others	66,000	.....
Total	509,000	537,000
Daily Average	72,714	76,714
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF PORTS—		
Total	509,000	537,000
Daily Average	72,714	76,714
Daily Average Four Weeks Ended	69,179	65,571
Distribution of Total California Oil Receipts is as Follows:		
Crude	95,000	.....
Gasoline	414,000	537,000
Gas Oil	.....	.....
Total	509,000	537,000

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
American Petroleum Institute Figures (Barrels of 42 Gallons)

	Week Ended May 25	Week Ended May 18
ATLANTIC COAST PORTS—		
Baltimore	261,000	65,000
Boston	141,000	154,000
New York	1,211,000	947,000
Philadelphia	369,000	499,000
Others	319,000	.....
Total	2,301,000	1,665,000
Daily Average	328,714	237,857
AT GULF COAST PORTS—		
Galveston District	54,000	69,000
New Orleans and Baton Rouge	218,000	175,000
Port Arthur and Sabine District	93,000	.....
Tampa	.....	41,000
Total	365,000	285,000
Daily Average	52,143	40,714
AT ALL UNITED STATES PORTS—		
Total	2,666,000	1,950,000
Daily Average	380,857	278,571
Daily Average Four Weeks Ended	299,821	276,464

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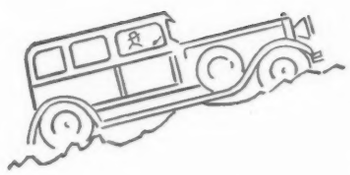

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United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1928	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	675,450	108,300	523,330	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
December	710,600	97,200	603,700	135,050	37,300	81,350	113,450	74,600	697,850	2,551,100	79,084,400
1929											
January	722,550	97,150	632,500	136,750	36,650	78,600	111,950	73,200	747,250	2,635,600	81,703,600
February	714,800	95,950	643,350	142,300	35,700	74,600	108,550	71,750	797,800	2,684,800	75,204,400
March	666,500	95,500	662,500	147,750	35,800	74,250	108,850	70,400	786,000	2,647,400	82,068,350
April	665,600	106,400	650,100	154,550	35,550	72,900	110,850	69,400	781,350	2,646,700	79,402,100
May 4	676,100	111,650	639,150	160,550	35,450	72,550	112,000	71,200	751,200	2,629,850	18,408,950
May 11	671,600	114,050	636,300	154,700	35,350	71,250	113,000	69,700	758,800	2,624,750	18,373,250
May 18	672,150	115,150	660,500	148,900	35,350	71,200	114,350	70,850	755,200	2,643,550	18,504,850
May 25	691,150	116,850	670,400	147,500	35,400	71,500	115,000	73,500	769,000	2,690,350	18,832,450
June 1	686,850	118,150	676,200	143,600	35,150	71,450	115,750	74,300	790,200	2,711,650	18,981,550
Increase	.....	1,300	5,800	.....	.....	.....	750	800	21,200	21,300	149,100
Decrease	4,300	.....	.....	4,100	250	50	.....	.....	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 1	May 25
Carson County	6,900	6,600
Gray County	40,600	29,450
Hutchinson County	26,000	25,100
Wheeler County	900	650
Others	1,800	2,000
Total	76,200	63,800

NORTH TEXAS

Archer County	17,100	16,950
Burkburnett	9,100	9,050
Electra	12,400	12,300
Iowa Park-KMA	5,300	5,400
Montague and Cooke Cos.	12,900	13,200
Wilbarger	26,500	26,350
Others	650	650
Total	83,950	83,900

WEST CENTRAL TEXAS

Brown County	7,800	7,950
Callahan County	3,700	3,800
Coleman County	3,850	3,750
Eastland-Desdemona	6,500	6,400
Jack County	2,600	2,450
Palo Pinto County	350	400
Shackelford County	13,100	13,250
Stephens County	6,500	6,400
Throckmorton County	650	700
Young County	6,900	7,000
Others	700	700
Total	52,650	52,800

WEST TEXAS

Crane-Upton Counties	47,400	47,500
Crockett County	2,200	2,100
Howard County	44,600	42,400
Jones County	4,200	4,250
Mitchell-Scurry Cos.	2,750	2,750
Pecos County	101,400	106,550
Reagan County	18,400	18,400
Winkler County	142,700	144,300
Others	1,900	1,950
Total	365,550	370,200

EAST CENTRAL TEXAS

Boggy Creek	2,700	2,750
Corsicana-Powell	8,200	8,300
Currie	400	400
Mexia	6,000	6,100
Nigger Creek	600	600
Richland	400	400
Wortham	1,200	1,250
Total	19,500	19,800

SOUTHWEST TEXAS

Dale	500	550
Laredo District	11,500	11,600
Luling	11,850	12,000
Lytton Springs	900	950
Somerset	1,700	1,800
Salt Flat	47,900	48,900
Others	4,000	4,100
Total	78,350	79,900
T'tl Tex. (Outside Gulf Coast)	676,200	670,400

TEXAS GULF COAST

Barbers Hill	8,400	7,050
Batson	1,400	1,400
Big Creek	1,800	2,100
Blue Ridge	3,900	3,400
Boling	1,800	1,700
Damon Mound	700	750
Goose Creek	5,900	6,000
Hull	9,100	8,700
Humble	6,750	6,900
Orange County	3,100	2,950
Pierce Junction	15,800	19,300
Raccoon Bend	5,300	4,550
Saratoga	800	900
Sour Lake	2,700	2,700
South Liberty	5,950	5,850
Spindle Top	26,650	27,500
Sugar Land	11,600	11,900
West Columbia	6,300	6,600
Washington County	2,900	2,900
Others	4,250	4,650
Total	125,100	127,800
Texas Total	801,300	798,200

OKLAHOMA

Braman	3,700	3,600
Logan County	14,150	13,000
Blackwell	3,850	3,800
Hubbard	1,800	1,900
Thomas	900	950
Tonkawa	10,250	10,100
Garber	5,700	5,700
Burbank	20,300	20,450
Osage (outside Burbank)	25,800	25,900
Cushing	19,600	19,850
Yale Jennings	6,900	6,950
Davenport	1,500	1,450
Bristow Slick	19,400	19,450
North Okmulgee	13,000	13,100
Lyons Deaner	7,800	7,900
Cromwell	8,200	8,200
Papoose	3,300	3,330
Wewoka	4,900	4,900
Seminole	36,350	36,650
Bowlegs	37,600	37,000
Searight	12,550	12,600
Little River	79,000	77,900
Earlsboro	59,150	61,650
Duncan District	6,750	6,700
Graham	4,350	4,400
Fox	1,400	1,400
Healdton	12,900	12,900
Hewitt	8,350	8,350
Scholem Alechem	13,050	13,200
Pearson	1,600	1,600
St. Louis	87,950	91,800
Allen	23,850	23,800
Maud	28,650	29,750
Mission	44,150	45,150
Oklahoma City	2,700	2,850
Others	55,450	52,950
Total	686,850	691,150

CALIFORNIA

Santa Fe Springs	201,000	180,000
Long Beach	177,000	178,000
Huntington Beach	41,500	42,300
Torrance	13,000	13,000
Dominguez	9,500	9,500
Rosecrans	5,800	5,800
Inglewood	23,500	23,500
Midway-Sunset	64,000	64,000
Ventura Avenue	60,000	57,000
Seal Beach	40,000	41,000
Elwood-Goleta	27,600	28,400
Kettleman Hills	3,500	3,500
Others	123,800	123,000
Total	790,200	769,000

KANSAS

Greenwood County	21,000	20,800
Florence-Covert	950	1,000
Peabody-Ebling	2,700	2,700
Eldorado-Towanda	12,850	12,900
Augusta-Fox Bush	3,000	3,000
Rainbow Bend	1,050	1,000
Russell	3,450	3,150
Churchill	6,600	6,950
Oxford	4,700	4,900
Sedgewick	32,150	30,650
Others	29,700	29,900
Total	118,150	116,850

NORTH LOUISIANA

	June 1	May 25
Homer	4,100	4,200
Haynesville	5,300	5,300
Caddo Light	8,100	8,300
Caddo Heavy	3,250	3,300
DeSoto Red River	3,900	3,800
Elm Grove	600	600
Bellevue	600	600
Cotton Valley	2,700	2,700
Urania	5,850	5,850
Pleasant Hill	500	500
Others	250	250
Totals North Louisiana	35,150	35,400

LOUISIANA GULF COAST

Bayou Boullion	200	200
East Hackberry	2,450	2,100
Hackberry	2,700	3,300
Edgerly	950	900
Evangeline	900	900
Lockport	4,050	4,000
Sorrento	250	300
Sulphur Dome	2,100	3,000
Sweet Lake	500	500
Vinton	3,800	3,900
Others	600	600
Total Louisiana Gulf Coast	18,500	19,700
Louisiana Total	53,650	55,100

ARKANSAS

El Dorado	4,700	4,750
Champagnolle	8,350	8,350
Smackover Light	6,050	6,100
Smackover Heavy	48,800	48,800
Stephens	1,000	1,050
Nevada	1,100	1,050
Lisbon	1,350	1,350
Others	100	100
Total	71,450	71,500

MOUNTAIN STATES

WYOMING

Salt Creek	32,200	32,100
Grass Creek	2,450	2,300
Elk Basin	750	850
Big Muddy	2,300	2,300
Lost Soldier	3,200	3,400
Rock River	2,550	2,450
Lance Creek	250	250
Oregon Basin	3,800	3,240
La Barge	1,750	1,800
Others	3,400	3,300
Total	52,650	52,000

MONTANA

Cat Creek	1,450	1,400
Sunburst	6,850	6,850
Pondera	3,350	3,100
Others	100	100
Total	11,750	11,450

COLORADO

Moffats (Craig)	1,800	1,650
Fort Collins	2,500	2,400
Florence	950	950
Others	2,050	2,600
Total	7,300	7,600

NEW MEXICO

Table Mesa	1,050	...
Artesia	900	900
Hogback	250	350
Rattlesnake	1,050	800
Others	400	400
Totals	2,600	2,450
Totals Mountain States	74,300	73,500

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	115,750	115,000

PRODUCTION SUMMARY

East of Rockies	1,847,150	1,847,850
Total U. S.	2,711,650	2,690,350

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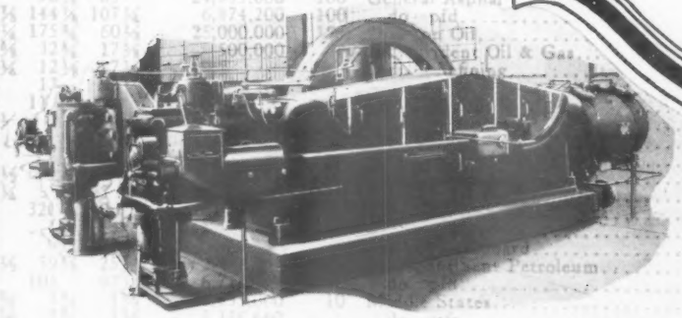

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North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Crude Advance Has No Effect On West Texas Recovery

SAN ANGELO.—The volume of new production coming from fields in the West Texas district is at the lowest level that has been reached in several years, and the recent crude price advance is having little effect on new developments. Wildcat activity is almost certain to reflect the improvement in the crude market and price situation, but none of the established fields or pools promise to have in excess of 20 drilling tests underway at one time within the next few months. A movement is on foot to carry on more exploration work around recent minor oil and gas strikes, but until flush production is developed a drilling rush will not take place.

Five New Locations

The Shipley pool, located in southwestern Ward County, added five new locations with the past week, including four made by the Shipley Oil Corporation on its Hayzlett 80-acre discovery lease. Two of these locations were made to offset producing wells recently completed by the J-H-L Oil Company, while the other two are along the southeast line of the lease, thus giving Gulf Production Company three prospective locations to drill. The latter company made location early this week for its Wristen Brothers 1, which will be a southeast offset to the J-H-L Oil Company's Hayzett 2, a 100-barrel flowing well at 2488 feet. Gulf Production Company's second completion on the O'Brien ranch, where a 1500 barrel high gravity oil well was scored early in April, is due next week, as O'Brien 5 was drilling within 100 feet of the pay early this week.

Attractive Wildcat

Gulf Production Company's W. N. Waddell leashold in Crane County may come through with attractive production several miles to the north of the trio of small wells completed since discovery of the pool in August, 1927. Waddell 7, located near the center of the west line of Section 10, Block B-23, encountered the top of brown lime at 2872 feet, with a surface elevation of 1763, and developed a flow of gas estimated at one million feet when six feet in the lime horizon. Big pipe is being pulled to drill in. This pool has not fulfilled expectations so far, but since the new test is logging key formations high the prospects are much better.

Production from the world's deepest well in the Big Lake field advanced to a new peak of 2607 barrels of 56 gravity oil during the 24-hour gauge ending Tuesday morning, accompanied by a flow of nearly 24 million cubic feet of wet gas. This well is owned by Group One Oil Corporation, controlled by Marland Oil Company, and the oil horizon is at 8523 feet.

Lower Potential

An aggressive movement to lower the estimated potential daily production being accredited to Winkler County was very much in evidence at the close of May when revised figures were released by Umpire Reed Alsobrook for the next 15 day period. The potential was placed at 1,318,724 barrels daily from 585 producers, or a drop of 469,029 barrels from the previous figures released May 15. The field committee, working in conjunction with the umpire and L. E. Barrows, Fort Worth, chairman of the proration advisory committee, gave all wells a flat cut of 25 per cent. in potential for the first one-half of June period, instead of the customary 10 per cent. cut, and only five wells were gauged.

Winkler County is having difficulty in maintaining an output within close range of its 150,000 barrels daily quota even though several groups of operators are producing more than their daily allowance through temporary court injunctions, with offset lease owners doing likewise. The shortage is due to the growing number of 40-acre units that can't make their quota with open flow or full stroke pumping.

New Gas Well

Pecos County gained another wildcat gas well during the past week when Buell-Hagan et al's University 1-B, located 660 feet from the east line and 330 feet from the south line of Section 36, Block 18, developed a flow of three million cubic feet of dry, sweet gas from sandy-lime at 1320 feet, with casing set at 610 feet. This gas well logged the top of salt at 945 feet, with a surface elevation of 2760 feet, and is about six miles southwest of the nearest production. The owners may procure permit and obtain leases on their University of Texas land from this well in its present status, and later drill more tests. In western Pecos County, Phillips Petroleum Company's wildcat oil producer on the Courtney-Pryor ranch, Section 78, Block "OW," dropped to 98 barrels of 25.6° gravity oil daily on pump after being on pump for about eight days, and failed to increase when deepened to 1402 feet. The owners are running 10-inch casing to shut off this pay, and proceed with making a deep test. Machinery has been set up for the drilling of a west offset to the discovery well on the D. W. Bowser land, location having been made in the northeast corner of Section 77, Block "OW," T. M. Ry. Survey.

Yates Operators Agree to Increase Output on July 1

FORT WORTH, Texas.—Operators and members of Yates field proration advisory committee unanimously voted to increase the allowable production of the field from its present quota of 100,000 to 130,000 barrels daily beginning July 1, 1929, during a brief session held here June 3, and recommendations to this effect will be submitted by the committee to the Texas Railroad Commission for approval. Those attending the meeting also endorsed a plan to revise potential production estimates on all wells in the field on or before the above date that may result in the potential figures, which were officially credited at 4,827,516 barrels from 305 producers at the close of May, to about 50 per cent. of such a sum. Unless outside opposition is registered against the proposed boost in daily allowance, it is generally believed that the commission will sanction the increase after holding a hearing at Austin shortly, as no waste of oil or gas of any importance is taking place in this flush field, while available pipe line outlet is more than adequate.

Discontinue Pooling

The proration advisory committee voted to discontinue pooling pipe line runs from Yates field, and after July 1 each carrier connected with the field will be privileged to connect with any unit or lease that the owner desires to be served by. Heretofore the lines of Humble Pipe Line Company, Shell Pipe Line Company and the Illinois Pipe Line Company have had a daily quota to run, while Gulf Pipe Line Company has been restricting its runs to oil produced by the Gulf Production Company. The increased allowance in production quota was largely made to

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permit Shell Pipe Line Company to increase its runs from 12,500 to 32,500 barels daily, while The Texas Pipe Line Company has requested a minimum of 10,000 barrels daily for its 12-inch carrier to the Coast beginning July 1. The latter two will now be free to solicit connections throughout the field to make their expected quotas, while producers will be free to switch their connections. This plan will cause major crude purchasing agencies to offer more attractive propositions to small operators in the field, and may also enable responsible "outside" purchasers to invade the field for long time crude contracts, making use of common carrier transportation service offered by Humble Pipe Line Company, The Texas Pipe Line Company and Shell Pipe Line Company to the Coast.

Simms Petroleum Company is the only producer in the field that is storing a portion of its current production, but the former company will have its three 55,000 barrels steel tanks filled about June 10, and then will make connection with one of the four purchasers.

Yates field operators went on record at the meeting as favoring a limit of 130,000 barrels daily during the next proration period, which was recently extended by unanimous vote for six months after July 1, thus ending the plan at the close of the year. However, in all probabilities the plan will be renewed again.

W. A. Moncrief, Fort Worth operator and part owner of producing properties in the Yates field, is chairman of the proration advisory committee, and presided at the meeting Monday.

According to revised proration figures prepared by Umpire Ray Richmond on May 31, Yates field's potential is estimated at 4,827,516 barrels, or 121,268 barrels less than the peak level established on May 10 when the last estimates were prepared. No new wells were added within this period, and only one old well was re-tested, but the drop is traceable to an arbitrary re-adjustment. The field has 1709 units on production of 100-acres or a fraction each. During the above interval two more wells began making sulphur water, giving the field a total of 43 wells making cut oil at the beginning of June out of a total of 305 wells. These figures do not include the score, or more of shallow pumpers drilled to less than 50 feet in depth of encounter seepage oil that is escaping behind casing on one or more wells near the Pecos River side of the field.

Since the current proration plan offers little inducement for unnecessary drilling in the Yates field, there are only eight new tests underway.

Fort Worth, Texas.—The Texas Company has moved its district offices here from the W. T. Waggoner building to the 18th floor of the Fort Worth National Bank building, and the office staff of The Texas Pipe Line Company has also been moved. L. E. Barrows is division manager for The Texas Company in Central and West Texas and New Mexico, while J. B. Haden is district pipe line superintendent.

New Wells Cause Production Rise in Texas Panhandle

AMARILLO, Texas. — The large quota of unusually prolific high gravity oil wells scored within the past few weeks in the Gray County section of the Texas Panhandle district reflected an increase of 17,350 barrels in daily average production for the district during the past week, thus restoring the output to the highest level that has been reached since December, 1927. The bulk of this increase was contributed by Gray County, which reached a new peak of 45,895 barrels daily average for the past week, with a gain of 16,545 barrels, and another substantial gain is assured for next week through the completion of a well on an inside location in the Bowers-Jackson pool gauging 10,275 barrels of 44° gravity oil.

Revival of flush production in Gray County is enabling the supply and equipment dealers that stuck through the dull period with branch stores and field representatives to enjoy a noticeable upward trend in sales, as the operators are creating business in their rush to sink as many wells as possible to properly protect their leases from drainage. Since both cable and rotary equipment are used in this area, the demand for supplies is greater. This prolific section of the Texas Panhandle has afforded more business for the supply concerns within the past four weeks than any single area in the state, and buying will continue as long as big producers are obtainable. A ready market exists for all oil that can be produced, as the four separate trunk lines serving the Panhandle have been unable to maintain a full line capacity without withdrawing from storage for months, while sufficient idle storage is available to handle an excess production for a limited period, although some of the crude purchasers will be forced to install larger gathering lines. Gray County oil is the most popular in the district, because of its gravity ranging from 40 to 44°, and as a whole not badly contaminated with sulphur.

Gray County Completions

The Operators Oil Company of Tulsa scored its third big well in as many months in Gray County late last week by completion of William Jackson 7, located in the northeast corner of the north 80-acres of the NE¼ of Section 88, Block B-2, H.&G.N. Survey, producing 10,275 barrels of 44° gravity oil during the 24-hour period ending at midnight Sunday from big pay at 2960-63 feet. This well drilled with rotary to 2780 feet, where a string of 8¼-inch casing was cemented and standard tools installed. Production estimated at 200 barrels daily was obtained from lime and granite wash formation at 2810-94 feet, and when deepened to 2960-63 feet the flow jumped to 690 barrels per hour for the first seven hours then dropped to 520 barrels per hour, with an estimated flow of four million cubic feet of wet gas. The well was carried to within two feet of sea level depth.

Magnolia Petroleum Company's J. B. Bowers 4, which was listed last week as a 10,000-barrel producer at 2970 feet, is an east offset to the above big well, but dropped off in flow to 1000 barrels daily within a week. Magnolia's well choked up considerably from paraffin deposits in the casing and flow lines, and Sunday was flowing 28 barrels per hour, but Monday noon was back to 40 barrels per hour.

Danciger Oil & Refining Company participated in the flush production late last week through the completion of its Helen K. Beck 1, located in the northwest corner of the NW¼ Section 28, Block B-2, making 50 barrels of 40° gravity oil per hour from granite wash at 2840-47 feet. This well was deepened Sunday to break in the producing horizon at 2860-74 feet, and the flow increased to 100 barrels of clean oil per hour, with an estimated flow of 10 million cubic feet of wet gas. The Sun Oil Company's Purviance 1, located in the northeast corner of the west 80-acres in Section 61, Block B-2, flowed 930 barrels of high gravity oil and three million cubic feet of gas from granite wash at 2910-14 feet, while The Texas Company's Purviance 1, located on an adjoining lease, showed for a similar caliber well at 2855-65 feet, with a total depth of 2925 feet.

Both Wheeler and Hutchinson Counties are partially sharing in the new production strikes, and in the Shamrock pool of the former county, Gibson Oil Corporation's Bentley 7 produced 500 barrels daily at 2318-90 feet, after passing through a flow of gas rated at eight million cubic feet daily at 2305 feet. Marland Production Company's J. M. Sanford 1-C uncovered flush production on the south side of the Canadian River in Hutchinson County with an initial flow of 100 barrels of clean oil per hour for first five hours from lime at 2782-85 feet. The latter is located in the southeast part of the north one-half of Section 79, Block 46.

Noodle Creek

Abilene, Texas.—Phillips Petroleum Company's P. L. Walters 1, located in the northwest quarter of Section 16, Block 19, T&P Ry. survey, has developed oil production from a stray lime horizon in the Noodle Creek field, Jones County, rated at 40 barrels daily at 2863-65 feet. The Texas Company and Cosden Oil Company's Laura Carter 6, located in the north extension of the field, picked up the same horizon at 2894-96 feet, and swabbed 110 barrels of oil on 24 hour test. The latter is rigging up to pump, and passed up shows of oil in regular 2500-foot pay and promise of a small producer at 2740-43 feet.

XUM

Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

No Immediate Production Increase To Be Expected in Oklahoma

TULSA.—Sufficient tests will be completed during the next 10 days in all of the present outstanding new fields of Oklahoma to give definite knowledge of their future production possibilities. With general opinion not ranking the Asher, Oklahoma City or new St. Louis development on a market threatening plane, and a steady decline in production shown by the Greater Seminole district during the past week expected to continue, any great increase in the state's crude oil production is not looked forward to in the immediate future.

Four producing wells have been completed in the Asher field with a combined recovery averaging 8500 barrels daily. The field has a total of approximately 50 operations with eight wells drilling below 3500 feet. Half of these are rigging up standard tools preparatory to drilling in. There are better than 20 tests drilling below 2500 feet in the field where the producing horizon is around 3800 feet.

The above drilling figures are rather astonishing when it is recalled that the field is but eight weeks old. It stands as the most competitive play in the state today.

Interest Shifting

Interest in the region is shifting to the south and southeast directions, since the north and northwest directions do not appear favorable because a number of tests are running as much as 300 feet lower than the discovery producer. Tests to the south and southeast however are running as a whole pretty close to the log of the discovery well.

Foremost among the important tests to the southeast is the McCulloch Oil Company and Carter Oil Company's Dowell 1, NW SE SW Section 28-6-4e, two miles southeast of the field. This well had the Sylvan shale at 3630 feet and the Viola lime at 3743 feet. A correlation with the Simms Petroleum Company's Laster 1, original Asher well, shows the well to be three feet higher on the top of the Viola lime. With formations raising to the south, due to the existence of the Arbuckle mountain uplift the 28-6-4e test is considered running practically level with the first producer. The Dowell 1 will be completed the latter part of this week or early next week. And its performance will be of utmost importance to Asher. Total depth of the well is 3753 feet, where the eight-inch pipe has been cemented.

First Asher Well

The first well to be completed on the Asher townsite will probably be the Reynolds Drilling Company's Townsite 1, in Block 8. It has set the eight-inch casing at 3923 feet in the Viola lime, encountered at 3920 feet. This well is lower than the discovery well, but may not be too low to find production. If it produces, the producing area will be carried to the northwest among small townsite lots. It has a good showing of oil at the total depth.

The latest completion to the field is the Prairie Oil & Gas Company and Tom Slick Oil Company's Laster 2, SE C NE Section 19-6-4e, and is also the southmost producer. The well is producing better than 3200 barrels daily, making it the best producer at the present time. Production of the discovery well in the SE C NE NE Section 19-8-4e, has declined to 2715 barrels. Tom Silck Oil Company shot its Bledsoe 1, NW SW NW Section 20-6-4e with 20 quarts the past week. It is now cleaning out but it is not flowing. Before shooting it was the smallest completion yet made at Asher, doing but 850 barrels daily.

Ten Wells Drilling

Of great importance will be the determination of the value of the deep producing horizon in the Oklahoma City field. Ten wells are drilling below 6000 feet, two have drilled out the plugs in the upper lime overlying the lime producing stratum and are drilling ahead to the pay formation lying only a short distance beneath. Three more tests are standardized and drilling out the cement plugs, with others due to cement pipe and standardize at once. Deepest among the drilling tests is the Mid-Kansas Oil & Gas Company's Fortson 1, C SW NE Section 24-11-3w, one quarter of a mile north of the producing well. It has a total depth of 6308 feet, where the seven-inch casing has been cemented, and is due to be drilled out at any time. The same company's Fortson 2, C NW NE Section 24-11-3w is but a short ways behind No. 1,—in an upper lime formation lying over the oil producing depth.

Sinclair Oil & Gas Company and Amerada Petroleum Corporation's test in the NW C SE Section 30-11-3w, drilled out the cement and gas blew the tools up in the hole to the control head, where they lodged. A three-inch plug in the casing beneath the derrick floor gave way under the pressure and 120 barrels of gasoline was carried out through this small opening along with 6,000,000 feet of gas in 12 hours. The well is thought to have a huge gas pressure and a large volume of gas. Orders have been issued for mudding the gas and deepening of the well. The top of the lime was penetrated at 6100 feet in the test. This is the fartherest southeast drilling well in Oklahoma City field. Attempts to recover the tools resulted in their dropping and snapping the cable. This is the first well in the pool to encounter such wet gas, all others having found the gas dry. The well is looked upon as practically certain to find production, and might blow itself in.

Heavy Gas Mudded

Just north of the discovery well, Indian Territory Illuminating Oil and Foster-Petroleum Company's Alice Bodine 2, SW NE SE Section 24-11-3w, has succeeded in mudding off the 25,000,000 feet of gas found at 6118 feet. The casing will be lowered to the bottom of the hole if possible, after which it will be ready to drill ahead. The producing well, Indian Territory Illuminating Oil Company and Foster Petroleum Company's Fee 1, C SE SE Section 24-11-3w, is making 2750 barrels daily with 500 barrels of water on gas pressure.

Impetus was added to the St. Louis activity in Township 7-4 by the deepening of the Independent Oil & Gas Company and Westland Oil Company's Rhodd 1, NW C Section 16-7-4, wildcat producer between St. Louis and

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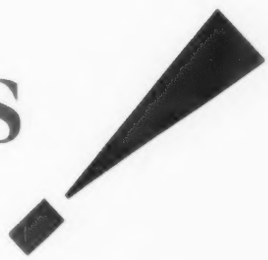
20 Companies *talk about* Casing Heads



A superintendent, engineer, executive or purchasing agent who wants to get the low-down on casing heads will find the Gulf Publishing Company's Composite Catalog of New and Standard Oilfield and Pipe Line Equipment a veritable mine of information:

A reference to the index of equipment in the Composite Catalog shows 20 firms listed under the "Casing Head" heading. A great deal of the descriptive matter given by several of the companies deals with either new or recently improved designs.

If you haven't a copy of this Composite Catalog, someone nearby in your organization does have one—use it!

The Gulf Publishing Company

(Catalog Division)

HOUSTON

XUM

Pearson. This well now has a total depth of 4069 feet in the Simpson sand found at 4012 feet. The output of the well doubled the past week and it is now producing 3260 barrels daily while agitating, according to the last gauge.

A number of tests are drilling in this district, which has a large proven area, including possibilities of Hunton, Simpson or Wilcox sand production. The only reason that it is not rated a serious market threat is the failure to find there a big Wilcox producing structure. However, development has not reached a stage where the existence of such a structure is condemned.

Kelly Extension

In the new Kelly extension to St. Louis field, Independent Oil & Gas Company completed Barrows 2, NW C Section 1-7-4, diagonal northeast offset to the discovery test. Barrows 2 is producing 1300 barrels daily from a total depth of 3965 feet in the Hunton lime. This is one of the tests that was mentioned last week as running quite low. The fact that it produced despite this handicap shows that production may be found low on the structure in the Kelly extension.

On the other hand, entirely offsetting the above belief is the failure of the Independent Oil and Gas Company's Barrows 1, SW C NW NW Section 1-7-4 direct east offset to the original producer, to find production. This well entered the Hunton lime at 3910 feet and at 3996 feet had found the Sylvan shale. With only 86 feet of Hunton lime, which is a thin section for township 7-4. This test may find production in either the Simpson sand or Wilcox sand.

Discovery Well Deepened

Kiester and Manning, Marlin and Erwin, McGraw Oil Company, Sinclair Oil & Gas Company and Shaffer Oil & Refining Company deepened their Kelly 1, SE C NE NE Section 2-7-4, discovery Kelly extension well, 12 feet to 3789 feet in the Hunton lime, without materially increasing its recovery. The well is making 1235 barrels daily. The same companies' Kelly 2, one location north of the first well, is 39 feet lower on top of the Hunton lime than Kelly 1. No. 2, in the NE C Section 2-7-4, found the Hunton lime at 3797 feet. Since it is a west offset to Independent Oil & Gas Company's Barrows 2, it is expected to produce.

The farthest southeast well in the Little River shallow sand area filled up with water at 3170-3215 feet the past week. It is the Continental Oil Company's Lask 1, NE NW SE Section 27-7-6. Prairie Oil & Gas Company's Stubbs 1, NW NE NE Section 18-9-7, east of old Seminole proper, and one-half mile northeast of the Sinclair Oil and Gas Company discovery well in this sector, has 600 feet of water in the hole at two feet in the Wilcox sand found at 4300 feet.

Second Well in New Sedgwick Area Swabs 1570 Barrels

TULSA.—The second well in the new Greenwick area, east of Wichita, in Sedgwick County, Kansas, was completed the past week and the third test is drilling in. The new well is the Gypsy Oil Company's Hammond 1, SW C NW Section 14-26-2e, an east offset to the Shell Petroleum Corporation's Lygrisse 1, discovery producer.

The Hammond test encountered the top of the Simpson sand at 3163 feet and at 3164 feet had a hole full of oil. It is now yielding 1570 barrels on the swab after commencing at 70 barrels per hour. Shell Petroleum Corporation's Fisher 1 is the test that is drilling in. It is a south offset to Lygrisse 1.

Development Agreement

An agreement has been made by Gypsy Oil Company and Shell Petroleum Corporation for a conservative producing program of the Greenwich district. Under the plan the Gypsy Oil Company's well will be permitted a five day swabbing period, during which time the Shell Petroleum Corporation's Lygrisse 1 will be swabbed to capacity. After duration of the five days, both wells will be pinched to 100 barrels daily. The program also stipulates that neither of the companies shall put a well on air pressure unless a 30-day notice of such action is given the other company.

Sedgwick County Peak

Production of Sedgwick County jumped to a new peak recovery during the past week when it made 35,513 barrels in one day. This production came from 68 producing wells. Since that time the number of producing wells has been increased to 72, but production has showed a slight decline. Most of the output is coming from the Valley Center field, where Bu-Vi-Bar Petroleum Corporation-Maryland Production Company and Gypsy Oil Company have nearly 18,000 barrels daily recovery on their block. Central Commercial Oil Companies' important test in the NE SW NE Section 20-13-21w, in Trego County, extreme western portion of Kansas, swabbed 280 barrels. It is now shut in. Much interest is still attached to this new producer. McPherson Oil & Gas Company's test in the NW Section 11-23-2w, Harvey County, topped the chat formation at 3002 feet. Water was found from 3006-12 feet. It now has 2700 feet of fluid in the hole, of which 1500 feet is estimated to be oil. An attempt is being made to shut off the water.

In the same county, Shell Petroleum Corporation's Haury 1-B, C SW Section 11-23-2w, near Halstead, turned its gas production into lines serving Hutchinson. So strong was the sulphur content that a number of complaints were made, causing the gas to be shut off. McPherson Oil & Gas Development Company will attempt to eliminate the sulphur content and market the gas. Barnsdall Oil Company's Lauck 1, C SW Section 35-18-21w, near Bazine, in Ness county, western Kansas, is now drilling ahead below 4200 feet. It had a showing of oil at 4180 feet, which failed to reach commercial quantities.

Max Steinbushell's Scurr 1, NE NE SW Section 21-20-10w, in Rice County, found a showing of black oil at 2305 feet. It is now running pipe to case off open hole, preparatory to drilling in and testing.

Gypsy Oil Company's Williams 1, NW SE SW Section 16-35-3w, near Caldwell, in Sumner County, and just north of the Oklahoma-Kansas state line, continues to produce more than 1331 barrels daily. This wildcat is producing from the Wilcox sand, and is the best well yet found in this area.

Texas Extending Line In New Mexico

Artesia, New Mexico.—The Texas Pipe Line Company is surveying route for the extension of its West Texas-New Mexico trunk line system from Jal, New Mexico, to penerate further north into Lea County. Plans are to start work shortly on an eight mile six-inch line from Jal Station to connect with The Texas Company et al's shut-in producer on the Bertha Lynch permit in Section 34-20S-34E, while in the meantime a 37,500 barrel steel tank has been erected at the Lynch well. A three-inch line will be built immediately from this tank to the pumping well of Henderson-Dexter et al on the Jewitt-McDonald permit in Section 18-20S-34E.

Fire Extinguished In San Juan County Well

Farmington, New Mexico.—Angel Peak Oil Company has succeeded in extinguishing the fire at its test in San Juan County. The well was not injured badly. The rig was not destroyed, due to its having fallen into a crater formed around the well site when the gas pressure got beyond control. Accumulated gas under a bridge broke loose, cleaning out the hole of a bridge and stuck bailer and leaving the well in better condition than had been expected. Along with the gas, which is estimated at two to three million feet, the well is producing a substantial amount of water.

XUM

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Santa Fe Springs Production Nearing Peak

LOS ANGELES — Completion of several good wells in the O'Connell zone during the week gave Santa Fe Springs another boost, sending production almost to the 200,000-barrel mark and placing the area within striking distance of the peak of early March. The resistance of wells in this formation to the expected rapid decline and the number of wells ready for completion indicate that Santa Fe Springs will remain a critical field for the remainder of the year.

A study of the performance of individual wells in the O'Connell zone immediately places the sand on a much higher plane than the Buckbee zone, while its thickness and the fact that the Upper Clarke sand may be included with it below a single string of casing, will add materially to its life. Two 12,000-barrel wells have been completed and both are flowing at almost exactly their original rates. Much significance has been attached to the action of these wells. In the Buckbee and Nordstrum zones the largest wells showed declines from the beginning, only one or two having increased for more than two or three days.

Several additional wells have been started for the O'Connell zone, following its record performance and as the Buckbee zone wells stop flowing or decline to a few hundred barrels this number will be increased. Seventeen wells are cemented over the zone, with 32 drilling in the sand below the final shutoff. Of this total number, however, not all will be completed in the formation.

The present production by zones follows:

Nordstrum zone	27,000 bbls.
Buckbee zone	41,000 bbls.
O'Connell zone	105,000 bbls.
Upper Clarke zone	1,000 bbls.
Shallow zones	24,500 bbls.
Total	198,500 bbls.

Drilling Wells

Associated Oil Company's Clarke 2, is drilling in the lower Clarke zone at 8118 feet and is in brown shale, with occasional streaks of oil sand. The company's Dallugge 7, also in the lower Clarke, drilled to 7850 feet, plugged back to 7790 feet and set seven-inch casing at 7785 feet. Fulton 4, drilled to 7632 feet, ran 6⅝-inch casing and is standing cemented at 7600 feet.

The Texas Company's Standlee 4, which came in last week at 6830 feet making 12,000 barrels of oil, is producing at the rate of 12,390 barrels of 34 gravity oil, cutting 0.1 per cent. As in the case of the Standlee 4, Wilshire Oil Company brought in Eagle 1, at 6800 feet in a combination of both the O'Connell and the Upper Clarke zones. The well is producing 12,000 barrels of 33.5 gravity oil, cutting 0.6 per cent. and is accompanied by 8,000,000 cubic feet of gas.

General Petroleum Corporation completed Santa Fe 168D, at 6332 feet for 1700 barrels of oil, with a cut of 8.4 per cent. and Santa Fe 189D, at 6571 feet for 5121 barrels of 32.0 gravity oil, with a 7 per cent. cut.

In the recompletion of its No. 1, Rhode Oil Syndicate got a splendid producer for the east side of the field at 6817 feet. The well was originally a Buckbee sand producer at 5685 feet. Deepening and taking in the O'Connell zone resulted in a 6500 to 7000-barrel well, where the production formerly was about 800 barrels. Oil is 34 gravity, clean, and is accompanied by five million cubic feet of gas.

The Texas Company completed and placed Mutual 2 on production for 700 barrels of 32.6 gravity oil, with a cut of 7.8 per cent. Completion depth was 6697 feet.

Universal Oil Company's Blanchard 7, which came in the latter part of March with a production in excess of 8000 barrels, and died a few weeks ago, was cleaned out and now is back on production making 5941 barrels of 33.6 gravity oil, cutting 1.5 per cent. Another recompletion for Universal Oil Company is the Blanchard 9, deepened from 5673 feet to 6473 feet. This well was placed on production for 3200 barrels of oil. Gravity is 34 and cut is 0.2 per cent.

Long Beach

Long Beach production for the week shows a decrease in excess of 3500 barrels, total being 170,000 barrels. MacMillan Petroleum Corporation completed its Security 2 at 6090 feet and the well is making 500 barrels of 27 gravity oil, cutting 6 per cent. Richfield Oil Company had a small well in the completion of Britsch 2, at 6568 feet, well making an initial of only 57 barrels of 24.5 gravity oil. The Shell Company's deep test, Nesa 11 is now at 8369 feet and a new string of three-inch drill pipe is bting run and drilling will be resumed. This is significant in view of the fact that recently about 5100 feet of the three-inch drill pipe was dropped and it looked as if further drilling progress may be impossible; but oil was circulated and the drill pipe recovered.

Huntington Beach

Production figures for the Huntington Beach field remained the same for the past week, a total of 42,000 barrels being recorded for each of the past two weeks. In view of the fact that estimated daily curtailment for this field is placed at 3300 barrels, temporary suspension of operations by the American Oil Producers and the West Coast Combination, Inc., the two concerns who were drilling deep tests at Huntington Beach, is not likely to result disastrously.

Inglewood

Max Pray's well at Inglewood created somewhat of a surprise when it started flowing steadily at the rate of about 400 barrels. Bottom of the hole is 3831 feet. Thirty feet of 4¼-inch liner was run, including 20 feet of perforated. Oil is from 47 to 49 gravity. This is a very important discovery.

Richfield

Richfield showed no change in production over the previous week, the figure remaining at 15,500 barrels. Continental Oil Company has made a new location at Richfield for a well to be known as the Stern 1. Location is 186 feet south and 100 feet east from the

For Six

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Major Lines

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Elwood

Pacific-Western Oil Company is preparing to drill one of the most interesting tidelands wells on the West Coast. It will be Spaulding No. 1, on a Permit offsetting the Rio Grande Oil Company - Barnsdall Oil Company's Bell-Luton lease, and will be located 200 feet south and 200 west from the northeast corner of Permit No. 92.

Kettleman Hills

Chanslor-Canfield-Midway Oil Company is preparing to start development work on the South Dome of the Kettleman Hills area. The first test is to be drilled on the Sahlein lease, location being 330 feet south and 330 feet west of the east quarter corner of Section 28-24-19.

Venice

Ohio Oil Company is suspending operations on its Del Rey Water Company test, located in the northwest quarter of Section 22-2S-15W. This test was drilled to 6200 feet and failed to make a showing.

Lawndale

Smith Development Company completed Peck 8, at 5884 feet and swabbed in at an estimated flow of about 1900 barrels. The 8¼-inch shutoff is at 5718 feet and a 4½-inch liner was run at 218 feet, including 187 feet of perforated, and landed on bottom. The well settled down to 850 barrels of 31.5 gravity oil, with a cut of 6 per cent. Sovereign Oil Company's No. 5, at 6963 feet, swabbed heavy mud and a little oil down to 5900 feet, when water broke in, resulting in a salt water producer. General Petroleum Corporation is abandoning Johnson 1, at Bologna and Freeman Streets, at 7018 feet.

Rincon

Richfield Oil Company's Hobson Fee 1, drilled to 7449 feet, has started flowing mud and gas. Mud flow is changing to oily mud and emulsion and gives indication of cleaning up and making clean oil.

Twin State Starts Test in Wildcat Area

Los Angeles.—Twin State Oil Company, subsidiary of the Sun Oil Company, has started one of the most interesting wildcat ventures in Northern California, near the town of Point Arena, on the Soldani property in Mendocino County. The Wildcat is located on the NW NE Section 14-12N-17W, the location being of great importance from a geological standpoint. The company has about 6,000 acres under lease, the holdings reported to include two structures.

New Method of Arriving At Potential

Los Angeles. — Based upon a new plan of arriving at potential production and allowable production in all oil producing areas in California, General Order No. 4, effective June 4, has been issued by Umpire F. C. van Deinse. The plan, as worked out by the umpire, assisted by the General Engineering Committee, contemplates that potential production shall be taken as the average estimated production of wells during the time an order is in effect, and that allowable production is to be based on wells according to volume of potential production, without regard to location.

This latest order provides for a curtailment of approximately 199,394 barrels per day, based on the estimated potential average from June 1 to June 15, of all producing wells in California, excluding new wells completed and placed on production subsequent to May 21. New wells in this class may be allowed to produce without interruption for 10 days after their completion, and the actual marketable oil production from each well on the tenth day will be considered the "potential production" of the well. On the eleventh day following completion and continuing until succeeding general orders become effective, marketable oil produced from each well is not to exceed a daily amount to be determined by applying the percentages of curtailment as set forth in the order, to such potential production.

Curtailment schedules as outlined in Order No. 4 will be applicable as follows:

1. Leases with potential production not exceeding as an average 20 barrels per well unit per 24-hour day, curtailment, 10 per cent.

2. Leases with potential production exceeding 20 barrels per well per 24-hour day, curtailment, 15 per cent.

3. Wells with individual potential production of 500 or more barrels per 24-hour day, curtailment 33.33 per cent.

According to van Deinse, "Curtailment figures shown are contemplated to be ratably applied to each well, but can be deviated from if such deviation does not work a hardship on neighboring producers and operators."

Santa Barbara Drilling on Increase

Los Angeles.—Completion and placing on production of the Olympic Oil & Refining Company's Lomas 1 in the Santa Barbara field, is responsible for increased interest here, as evidenced by the erection of six new rigs in this area the past week. Land transfers and leasing continue to furnish plenty of excitement.

Olympic Oil & Refining Company is working on five locations and has 2,500-barrel tanks standing full and two 750-barrels tanks ready to take care of additional production.

Dunlapp & Knapp have a rig in Palisades Tract No. 2, Lot 20, Block I.

Exeter Oil Company's Palisades Tract No. 2, Lot 21, Block I, is a foundation.

General Petroleum Corporation has staked two new locations, Oliver 1, located 150 feet south and 150 feet west of the northeast corner of the property; and Wheeler 1, located 850 feet south and 125 feet east of the northwest corner of the property.

The Major Oil Company (formerly Nugent), has spudded No. 1, in Lot 15, Block J.

Pacific-Western Oil Company has located No. 1 80 feet east and 45 feet north of the southwest corner of Lot 13, Block 9.

William Rhoads is building rig on the Palisades Tract No. 2, Lot 2, Block H.

Joseph Seeple has rig up for No. 1, located in Lot 1, Block J, in Tract No. 2.

Governor Signs New Gas Law in California

Sacramento, Calif. — Senate Bill No. 560, amending the petroleum and gas law of California, has been signed by Governor C. C. Young. The bill contained and urgency clause and immediately went into effect. Although aimed directly at the waste of gas, the new law is intended to reduce oil production in flush areas. In March alone, more than 19 billion cubic feet of gas was wasted in California. This amount would have supplied one of the country's largest cities.

Section 8b provides that "The unreasonable waste of natural gas * * * is hereby declared to be opposed to the public interest and is hereby prohibited and declared to be unlawful. The blowing, release, or escape of natural gas into the air shall be prima facie evidence of unreasonable waste."

Section 8d provides that upon complaint being made to the Director of the Department of Natural Resources that in any oil field there is occurring or threatened an unreasonable waste of gas, he shall direct the State Oil and Gas Supervisor to hold a hearing to determine whether such waste is occurring or threatened and to determine the extent to which the waste of gas occurring or threatened is unreasonable, and provides for the issuance of orders for the discontinuance of such unreasonable waste.

Section 9 provides for the hearing of appeals from the Supervisor's orders by the Board of Commissioners in the district.

Section 14a provides that in the event of failure to comply with the Supervisor's order, or the order as modified by the Commissioners, the Director of the Department of Natural Resources shall bring suit in the Superior Court to enjoin the unreasonable waste of gas.

Section 14b provides that the Director may bring suit to enjoin the unreasonable waste of gas whether or not an order has been issued by the Supervisor.

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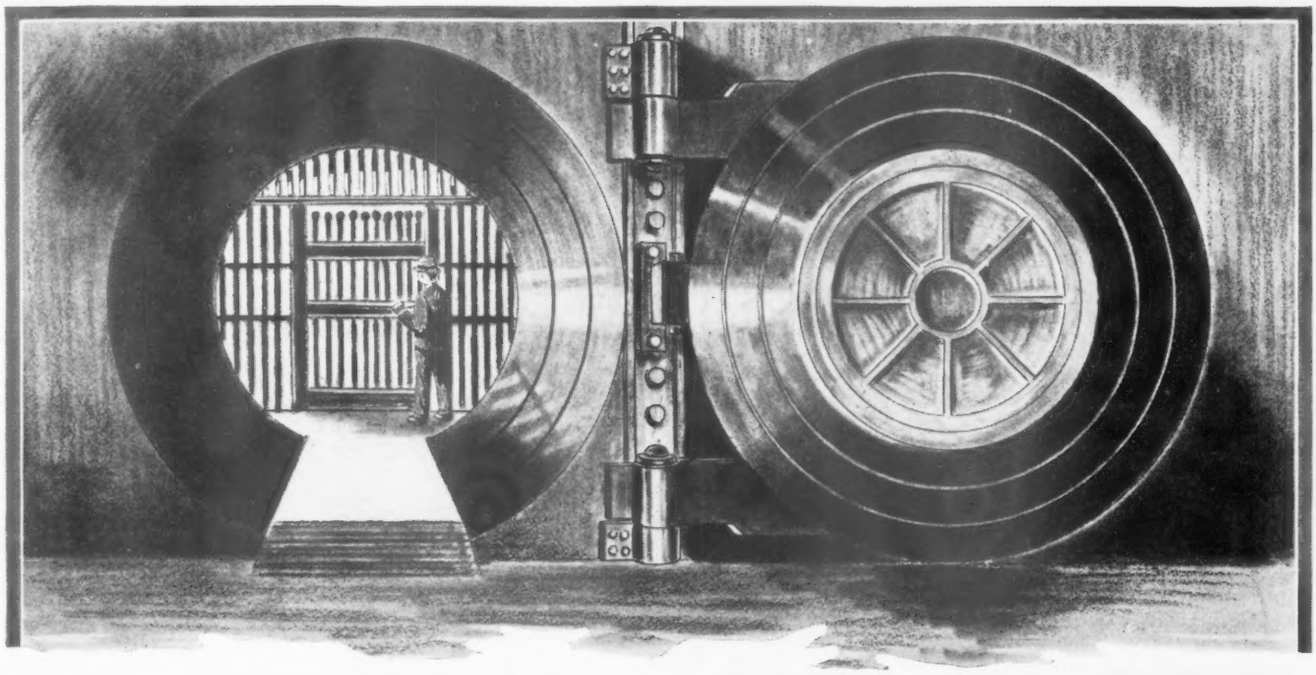

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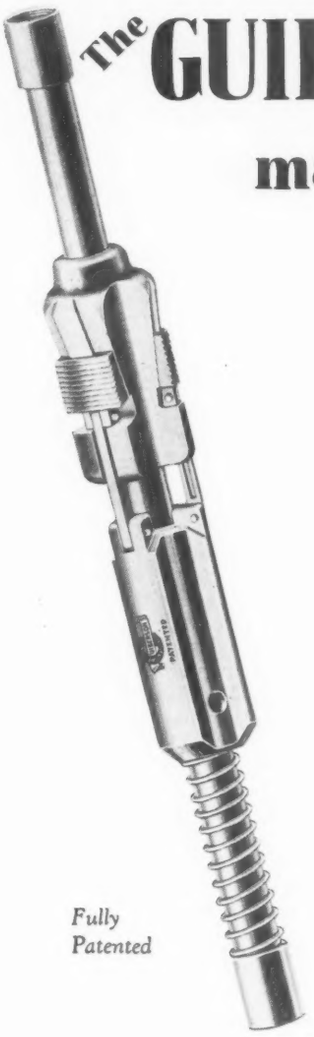

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BETTER BE SAFE THAN SORRY

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

New Depth Record Set at Evangeline; 5,000 Barrels Initial

HOUSTON.—Yount-Lee Oil Company has established a new record for the Gulf Coast in deep production, having completed Houssiere 6 at Evangeline, Louisiana, on June 3 for 5000 barrels initial production at 7292 feet. The well is on a one-quarter-inch and a three-sixteenths-inch choke, and is producing crude which tests 30 gravity, corrected.

Beside its record as the deepest producer in the Gulf Coast, this well also has the distinction of being the next-deepest producing well east of the Rocky Mountains; its depth being exceeded by that of only one other well in the United States outside of California—the Texon Oil & Land Company-Group One Oil Corporation's University 1-B in Reagan County, Texas, a producer at 8523 feet, and the deepest well in the world.

Aside from that deep producer in West Texas and the new well at Evangeline, the only producers in the world exceeding 7000 feet are in California. There are many wells there in the Santa Fe Springs, Long Beach and Ventura Avenue fields producing profitably at depths from 7000 to 7700 feet.

Deep Coastal Producers

Humble Oil & Refining Company's Simms-Smith 73 at Goose Creek formerly held the record of producing oil from the greatest depth in the Gulf Coast; it came in about May 15, 1928, at 6159 feet, making considerable gas and oil at the rate of 700 barrels daily, with the drill stem in the hole, but was never completed as a producer, and was finally abandoned at 6245 feet. The deepest completed producer in the Gulf Coast, prior to completion of the new Evangeline well, was Pure Oil Company's Sweet Lake 4 at Sweet Lake, Louisiana, which came in at 5924 feet for 2000 barrels and held up as a good well for over a year. Prior to the establishment of that record, the deepest completed producer of the Gulf Coast was Yount-Lee Oil Company's Fee 27 at Spindle Top, a 1600-barrel well at 5879 feet.

Including Evangeline, there are now 10 fields in the Texas and Louisiana Gulf Coast country which have commercially produced oil from depths greater than 5000 feet. They include Humble, Spindle Top, Sweet Lake, Barbers Hill, Pierce Junction, Fannett, Lockport, Hull and Allen Dome. As pointed out above, some production has been found below 5000 feet at Goose Creek, but it did not hold up. And in the Orange field Gulf Production Company's Kishi-Lang B-4 produced some oil, but not in commercial quantity, from 5483 feet.

Aside from being the deepest producer of the Gulf Coast, the new Yount-Lee Oil Company well in Louisiana is also the deepest test that has ever been drilled in the Coastal country. Former record holders for depth included Humble Oil & Refining Company's Simms-Smith 74 at Goose Creek, abandoned in February, 1929, at 6967 feet, and Yount-Lee Oil Company's Gladys 6 at Spindle Top, abandoned at 6765 feet. Several tests at Lockport were drilled below 6000 feet, and at Fannett, the Gulf Production Company in 1927 abandoned one test at 6488 feet. At Spindle Top Yount-Lee Oil Company has repeatedly made attempts to get deeper production on the south and east flanks of the dome, drilling no less than 14 tests below 6000 feet; but almost invariably it was found necessary to abandon hope of deeper pay because of heaving or sticky shale. One test which had been started with the hope of going to 10,000 feet, had to be abandoned at less than 7000 feet on account of the troublesome shale.

Considering the successful completion of the Yount-Lee Oil Company well at Evangeline, and recent opening of deep flank sand production at Humble and Barbers Hill, it is logical and reasonable to expect deeper and deeper drilling and deeper production around other domes of the Gulf Coast; and no dome can be definitely condemned as a source of oil as long as it remains possible to probe deeper into the sands around it.

Location Off Dome

The new producer at Evangeline is 3600 feet southeast of the nearest production, being off the dome in that direction. That well is the sixth test that Yount-Lee Oil Company has finished on that side of the field, each having been a little farther away from the top of the dome than the preceding test.

The producer, Houssiere 6, is in Section 47-9s-2w, Acadia Parish. The top of the sand from which the oil is coming is at 7225 feet, and as given above, the total depth of the hole is 7292 feet. Seven-inch casing was set at 6830 feet.

In Section 48-9s-2w in the Evangeline field, Yount-Lee Oil Company is drilling another deep test, the only other deep one of the field. It is the Crowley Oil & Mineral Company 99 (No. 4 for the Yount-Lee Oil Company). That test has set 7⅝-inch casing at 7200 feet, and is now drilling at 7200 feet.

Early in August, 1928, Evangeline (otherwise known as the Jennings) was a center of considerable interest when E. F. Simms opened a new deep sand on the northwest flank of the dome, bringing in Cockrell 1 for 1000 barrels at 3839 feet. That sand, however, proved a disappointment, and after a few months of activity, interest in the area waned.

Large Wells

This field is among the oldest in the Gulf Coast. It was one of the first fields to follow Spindle Top. The discovery well was Heywood Brothers' Jennings-Clement 1, completed in August, 1901, in a sand at 1882 feet. Like Spindle Top it had an unusually great number of large producers from the standpoint of initial production, and its wells were noted also for their long life, various ones producing from 1,000,000 to 2,500,000 barrels before quitting. One well, Dr. Wilkins' No. 2 (later known as Heywood Brothers' No. 2) came in for 96,000 barrels initial production, and ultimately produced a total of 2,500,000 barrels. Another large producer there was Bass & Benckenstein's well which made 1,500,000 barrels. Up to the present, 867 wells have been drilled at Jennings, and the field has produced a total of approximately 40,000,000 barrels. In its peak year, 1906, it produced 9,000,000 barrels. In 1928 the production for the year was 373,000 barrels.

Unlike the early wells at Spindle Top, the producers at Jennings were completed not in cap rock but in sands around 2000 feet. It was at Jennings that the first occasion arose for dealing with the loose sands now so common in the Gulf Coast, and as a solution of the problem, Fred I. Getty then invented a strainer, one of the most important of oil field inventions.

Aside from the interest connected with the new deep well at Jennings by reason

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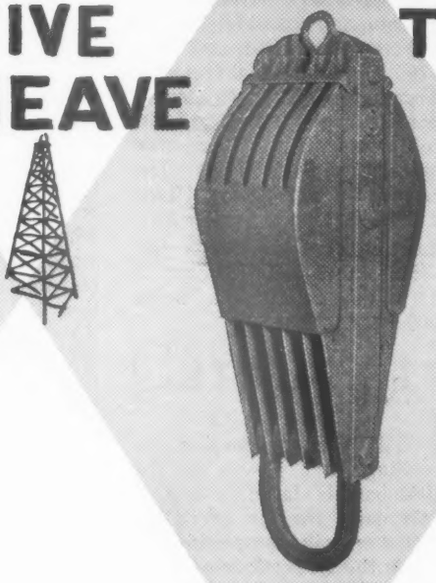

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of its being the deepest test and deepest producer in the Gulf Coast, it is interesting further by virtue of the fact that it was drilled by the Yount-Lee Oil Company; for even before the completion of this deep producer in Louisiana, that company had acquired a reputation as an unusually successful operator in opening production in deep sands flanking Gulf Coast domes. Previous successes included the opening of deep pay at Spindle Top, Sour Lake, and more recently at Barbers Hill. Yount-Lee Oil Company now has around 90 per cent. of the production at Spindle Top, where the field daily output is around 27,000 barrels. It was that company that started the boom of 1926 at Spindle Top, following which the total recovery of the field has increased from 48,000,000 to more than 104,000,000 barrels; with Yount-Lee Oil Company the principal producer all the while.

Deep Texas Tests

Besides the deep tests in the Gulf Coast and the world's deepest well in Reagan County, several other deep tests have been drilled in Texas. In Caldwell County the United North & South Development Company abandoned Kelly 1 at 7859 feet and Tiller 2 at 7504 feet, both being in the Luling field. Rycade Oil Corporation's Chittim 2 in Maverick County was abandoned in February, 1929, at 7635 feet, at which depth it bailed a small amount of oil.

The deepest well that has been drilled in Oklahoma was Cromwell-Franklin's Thompson 1 in NE NE Section 15-12-3w, Oklahoma County; it was abandoned as a failure at 7178 feet.

In the Eastern states several tests have been drilled to more than 7000 feet, but they were failures. They include the following: Natural Gas Company's Lake test, located eight miles southeast of Fairmond, West Virginia, abandoned at 7579 feet; the same company's Goff, located 20 miles south of the Lake well, abandoned at 7386 feet; and People's Natural Gas Company's Geary, four miles northwest of McDonald, Pennsylvania and 20 miles southwest of Pittsburgh, abandoned at 7248 feet. Each of those three tests were drilled with cable tools. One cable tool test in Germany near Czuchow, reached 7348 feet.

The new producer in the Evangeline field, like practically all others in the Gulf Coast and in California, was drilled with rotary tools.

Orange

Houston.—Three wells, all of which were old wells drilled deeper, were completed the past week in the Orange field, providing more new oil than the field usually obtains in a week. Sinclair Oil & Gas Company completed Granger 5 for 150 barrels oil at 3035 feet; Brownie-Babbett Oil Company finished McLean 8 for 30 barrels oil at 4030 feet; and the Orange Petroleum Company's Michael-Berwick 3 came in for 10 barrels at 3065 feet.

Pierce Junction

Houston.—Pierce Junction led the fields of the Texas Gulf Coast in initial production during the past week. There were five completions there, including four producers with a combined initial production of nearly 4000 barrels. Gulf Production Company completed Cain 8 for 750 barrels at 4650 feet, and Taylor 29 for 1200 barrels at 3800 feet. Navarro Oil Company finished Dooley 15 for 1000 barrels 27 gravity oil at 4500 feet, and completed Cain B-1 for 1000 barrels 32 gravity oil at 4900 feet. The Moody Corporation abandoned Hume 4 in salt at 3510 feet.

Pierce Junction is the next-largest producing field in the Gulf Coast at present, its daily production being around 16,000 barrels.

Salt Flat

Houston.—Salt Flat production for the week ending June 1 was on the average 47,900 barrels daily, as against 48,900 barrels daily for the preceding week. There were six completions in the field during the week; four of them being Humble Oil & Refining Company wells. That company's J. R. Tiller 1-B and 2-B came in for 350 barrels at 2694 feet and 200 barrels at 2710 feet, respectively; its J. R. Tiller 2-A came in for 700 barrels at 2702 feet; and its Clyant Smith 1-B was completed in the Buda for 100 barrels at 2538 feet. Cranfill & Reynolds' Hanson 3 was too far west and was a failure at 2712 feet. Shell Petroleum Corporation's Clyant Smith 1 came in for 350 barrels at 2311 feet.

Abandon High Island Test

Houston. — Gulf Production Company's Smith 8 at High Island, Galveston County, tested a showing at 3450 feet, tested salt water, and will be abandoned.

North Dayton

Houston.—On the south end of the North Dayton field, Liberty County, Fort Bend Oil Company's Bladerack 1 swabbed 100 barrels of 38 gravity oil at 3705 feet, and will be drilled deeper. This well is approximately 900 feet east of Harrison Oil Company's Quintette 1, which in the summer of 1927 opened a new producing area, giving North Dayton its first deep production. Harrison Oil Company also completed No. 3 on the same lease as a producer, but No. 2 was a failure. North Dayton is one of the oldest known domes of the Gulf Coast, the first production having been found there in 1904; but aside from the Harrison wells, the production has been entirely from the cap rock at shallow depths, and the field has never been of importance. The peak year was in 1928, when the production, principally from the deep Harrison Oil Company wells on the south flank, amounted to 210,000 barrels. The peak year of the shallow production was 192,000 barrels in 1906. Through 1928 the field's total recovery was 913,000 barrels.

Texas Finds Salt Dome in South Louisiana

Houston.—Another South Louisiana salt dome which had been discovered by seismograph was definitely proved to be a dome by the first test drilled when The Texas Company the past week drilled into anhydrite at 1950 feet in its Garden Island Bay 1 in Section 107-23s-32e, Plaquemines Parish. This test had an oil-showing sand at 1675-85 feet, but when casing was set, the well tested salt water and was deepened. This dome is the most easterly one known in Louisiana; being in fact about as far east in that state as it is possible to go, on the peninsula jutting out into the Gulf of Mexico below New Orleans. The dome is 75 miles southwest of New Orleans, and about 15 miles southeast of the town of Venice.

Ascension Parish

Houston.—The first test on Darrow dome, Ascension Parish, Louisiana, has been abandoned as a failure. It is Gulf Refining Company of Louisiana's Belle Helene Sugar Company 1, located 100 feet each way out of the northwest corner of lot 17 in Section 27-10s-2e, at a point less than a mile from the Mississippi River. The test was abandoned at 5600 feet in a water sand.

Indications of a dome in this area were given through seismograph work. Gulf Refining Company holds a large percentage of the acreage in the district, and is responsible for discovery of a dome there; but in addition to the holdings of this company some leases are held by other companies, including Calcasieu Oil Company.

Darrow dome is approximately 12 miles west of Sorrento dome, where the Gulf Refining Company early in 1928 opened a new field.

Institute Directors Meet Next On June 28

New York.—The next regular monthly meeting of the board of directors of the American Petroleum Institute will be held here on June 28, William R. Boyd, Jr., executive vice president, announced today. It is expected the directors will discuss results of the conference of governors and representatives of the petroleum industry called by President Hoover for June 10 at Colorado Springs for a discussion of oil and gas conservation measures.

XUM

Columbia Less Hostile Toward Outside Interests

(Continued from page 37)

which these lines are being written, these conferences have not yet been terminated. It has been eight days that they have been carried on, morning and evening. As even now the agreement on said bases has not been terminated, it is, therefore, not possible to announce them; but it is possible to affirm that they will be widely accepted by the exploiting companies, according to the ideas of the American expert, H. Foster Bain."

Question No. 4.—Do you believe that the petroleum industry of Colombia will be nationalized, in the sense in which that term has been employed with reference to the nationalization of petroleum industries of Russia, Roumania, and Mexico? Do you think that a modified form of nationalization will be adopted? Referring to the petroleum bill of 1928, which failed of enactment, do you believe that the clauses relating to the organization of semi-official exploitation, pipe-line and refining companies will be incorporated in the new bill?

Answer. — "In Colombia there has never been any tendency toward nationalization in the sense in which it has been employed in Russia; that is to say, expropriation without indemnification. Neither has it been the tendency, in the strictest sense, Roumanian or Mexican. This law does not do anything more than reclaim for the state certain properties which private individuals claimed that they possessed, based on false or doubtful titles. I am fully convinced that in the project of law that is now being prepared, and which will be presented to the congress this year, there will not be any nationalistic clause or article in the Russian sense of the word. Naturally, there will be protected in it the interests of the state, such as they are protected in the laws of the United States. By all means, I can assure you, that in this project of law, foreign capital will be fully protected and will be given just opportunities to operate with profit in our country. With respect to the dispositions relative to semi-official companies as the only manner of exploiting petroleum in Colombia and refining it, I can assure you that they will not exist in the new project."

Question No. 5. — In your opinion, would a nationalization law, of the type proposed in 1927 and 1928 be constitutional? (Here, our representative had in mind the Montalvo bill of 1927, modeled upon Roumanian and Mexican legislation then in effect, which was rejected by the congress. However, Sarmiento answers with respect to the Emergency Law of 1927, which has been discussed in a previous issue.)

Answer. — "The law of 1927, from the moment in which it was approved by congress and sanctioned by the executive power, was not in opposition to the constitution. With respect to the one of 1928, I also think that it would not be contrary to the constitution. Perhaps it would have been inconvenient for the development of the country, due to impeding foreign capital, but it would not be unconstitutional."

Question No. 6.—Judging from what information you have at this date, do you expect that the new petroleum bill will permit foreign capital, foreign companies and foreign talent to participate in the development of Colombia's petroleum resources? Will foreign companies be permitted to operate only on private lands, or on public lands and lands whereunder the oil rights are reserved to the nation?

Answer. — "This question is now answered in all of the preceding. Nevertheless, the following can be added: In the lands where subsoil is owned by individuals, the government will not intervene to collect royalties; it will barely collect a tax (i. e., a small production tax) in the same manner as is done in the United States. The lands belonging to the nation can also be exploited by foreign companies; and to them, principally, will refer this project of law which actually is being prepared."

Question No. 7.—Have you any message which we may convey to those engaged in the oil industry of the United States?

Answer. — "Yes; that it would please me to publish in the *Boletin de Mines y Petroleos,* official publication of the department of the same name, the editing of which is entrusted to me, all classes of good contracts, for them and for my country.

"Sincerely yours,
"Luis A. Sarmiento,
"Redactor del Boletin de Minas y Petroleos."

Cancellation of Government Permits Reaches Big Total

WASHINGTON. — Department of the Interior has canceled 5544 applications for permits to prospect for oil and gas and 2596 permits heretofore issued have also been canceled. The total number of cases acted upon since the present program was inaugurated on March 12 is 18,992, which included 10,852 notices to show cause.

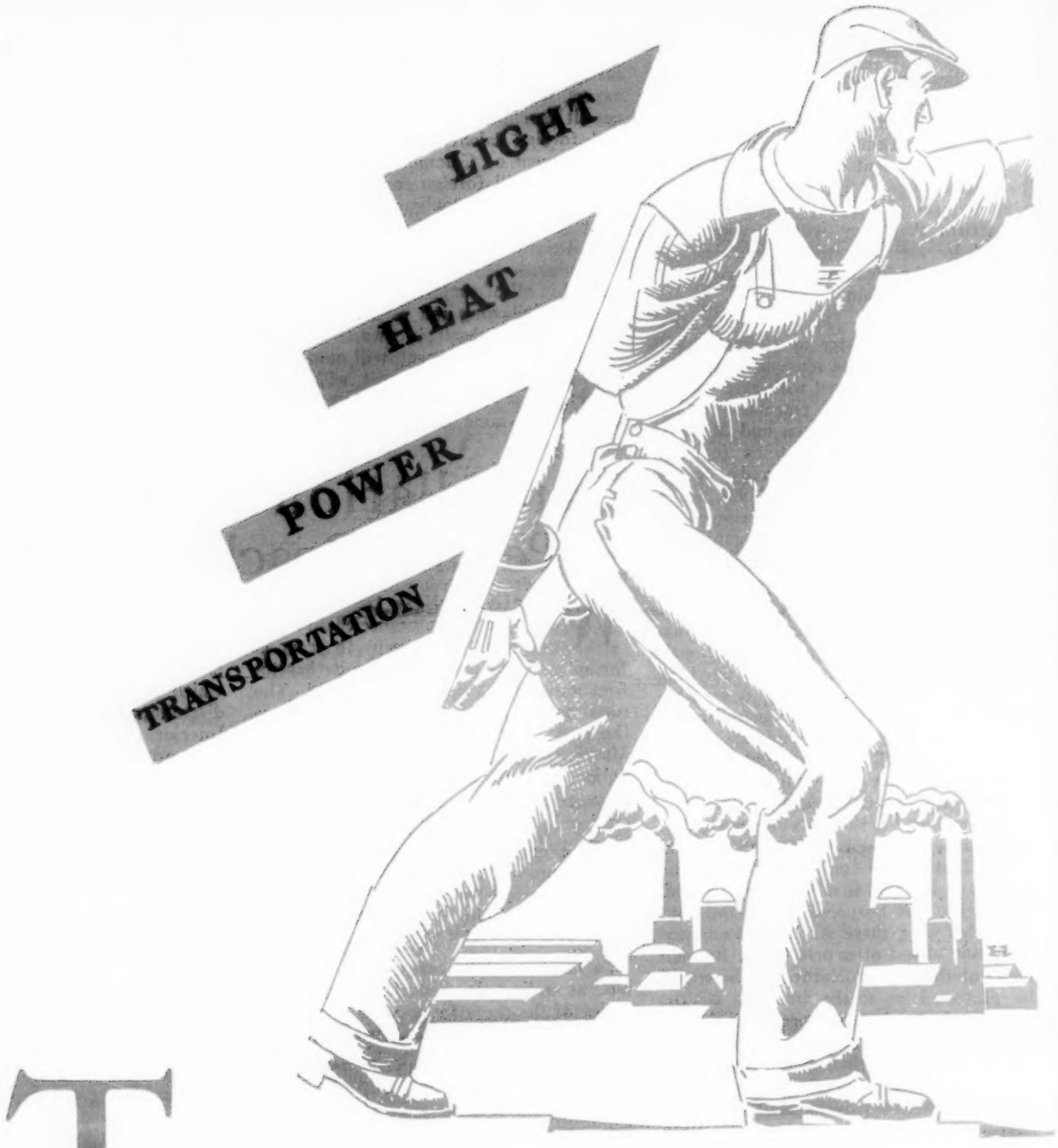
It is interesting to note that the cancellations have been in 17 states. Extension of time has been granted upon permits and groups of permits in practically all of the western states, especially New Mexico, Colorado, Wyoming, Montana, Utah, Nevada and California.

In handling these cases the department has, as indicated when the conservation policy of the president was put into effect, endeavored to be just and to meet every reasonable equity. In carrying out this policy, certain classes of equities have been recognized on existing permits. Expenditures for necessary roads, drilling rigs, wells which failed to effect discovery, and other expenditures directly connected with proposed development have been recognized. Where the permittee had been drilling with reasonable diligence but had been unable to comply strictly with the terms of the permit within the allotted time his equity has been recognized. The same has been true where work upon the permit has been prevented by causes entirely beyond the permittee's control. Appropriate extensions have been granted for group programs already approved when the permittees had proceeded in good faith but had been unable within the time allotted to complete their programs. It has been recognized that expenditures for geological surveys form a basis for equitable consideration in both permits and applications.

In consideration of applications, the department has not recognized expenditures occasioned by searches for vacant lands, disposition of conflicting claims, filing fees, attorney and notary fees and other preliminary items to enable the applicant to make up his mind whether he wants a permit on a given area. His application merely indicates his desire to explore or prospect on public lands, permission for which is, under the law and regulations, discretionary with the Secretary of the Interior, but under a precedent that has been established, applications for permits pending March 12 have been granted if a sufficient showing has been made of wise expenditures for geological investigations.

Permittees under group developments previously approved and undertaken who have carried out their programs with diligence and good faith have been granted extensions on the same basis as individual permittees. Extensions have been granted in certain areas in New Mexico and Utah where exploratory drilling programs have been underway. On the Navajo Indian reservation a company was granted the right to continue exploration of its oil and gas permits on evidence submitted that a substantial sum had been expended on a well on a nearby tract within the same structure, that the company had contributed to roads leading to the lands, and had drilled a well 520 feet deep on its own permit. The joint development well was shown to have reached a depth of 4677 feet and was being continued. A notable group development which has received an extension is in southern Utah, 75 miles from the nearest railroad, and reached only by airplanes or pack horses.

A number of applications filed prior to March 12 have been accepted and approved upon a showing of substantial and well-directed expenditures for geological surveys and investigations. Liberality has been and is being displayed in all those cases where reasonable diligence and bona fide expenditures have been made upon or in connection with the permits or groups of permits. In cases where the record indicates that such expenditures may have been made but no evidence thereof was on file, the secretary has accorded parties in interest an opportunity to furnish further evidence.



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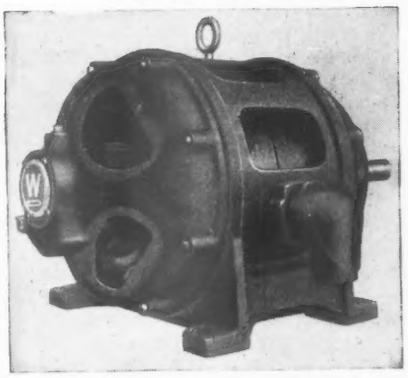

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Louisiana-Arkansas Field Notes

Pine Island Extension Area Yet To Show Real Worth

SHREVEPORT — Within the next few days a fair idea of the size of the new extension of the Woodbine horizon of Pine Island, in Caddo Parish, nine miles north of Shreveport, should be obtained as a result of the test of an offset to the northeast and one to the west of the Standard Oil Company of Louisiana's Hunter Estate 1, in NW NW of Section 17-19-14, completed at total depth of 2422 feet, extending the producing area three miles to the southeast. The extension producer's daily yield is 37 barrels.

Developments during the last week left the question still in doubt as the Standard Oil Company of Louisiana's W. K. Henderson 1, in the southeast corner of Section 7-17-14, 900 feet northwest of the discovery well, was abandoned as a salt water hole at 2427 feet. A slight show of oil was obtained in the test.

However, almost due west and a little north in NE NE of Section 18-19-14, Gulf Refining Company's P. W. Oden 1 flowed oil for 10 minutes in a drill stem test at 2400 feet. Meanwhile, a quarter of a mile northeast of the Hunter Estate 1, the Standard has set liner and is arranging to bail at 2416 feet in Hunter Estate 2, in SE SW of Section 8-19-17. A southern offset to the extension producer, Standard Oil Company of Louisiana's Hunter Estate 4, in Section 17-19-14, tested dry in a drill stem test at 2420 feet. Four feet higher the well tested 360 feet of oil in a drill stem test. The well is drilling ahead in black shale at 2443 feet. Another western offset test due soon is Gulf Refining Company's Pope Oden 2, Section 18-19-14, which has total depth of 2405 feet with 6⅝-inch casing set at 2383 feet.

Lide and Davidson, two and a quarter miles northwest of the Hunter Estate 1, are bailing Glassel 1, in NW SW of Section 1-19-15, with total depth of 2482 feet. Six-inch casing was cemented at 2400 feet.

Standard Oil Company of Louisiana's W. K. Henderson 1 was not the only failure recorded in the new field. Root Refineries' Liebman 1, in Section 12-15-19, which was started before the Hunter producer was completed, was abandoned as a dry hole at 2588 feet. The Blossom sand was topped in this well at 1881 feet. Red shale was topped at 2463 feet and lime and shale were encountered from 2530 to 2540 feet.

New Locations

One new location was made in the new area during the week. This is Sam Gold and associates' Henderson 1, in SW NE of Section 17-19-14. Another wildcat location picked up during the week was Benedum & Trees' State 2, in NW NE Section 22-14-12, De Soto Parish, offsetting a well that blew in as a gasser at 2630 feet but was abandoned at 3000 feet when deepened. There were 11 new locations made in the proven areas in Ouachita and Richland Parishes, seven being in the latter parish. East Texas accounted for three new locations, all in Harrison County, while in Arkansas there were three new locations, all wildcats, besides resumption of activity in three old wells. The wildcat locations in Arkansas are: Jacob Laskin and associates' Dennis 1, in SW NW Section 11-20-23, Columbia County; Lohman and Le Grand's Fogle 1, in NE SW Section 18-14-16, Ouachita County, where derrick is up, and Johnston-Gummer Oil Company's Cargile 1, in SE NW Section 4-18-13, where derrick is being built.

Ohio Oil Company's Lynn 1, in SW SE Section 7-17-13, completed at 3077 feet, flowing 900 barrels of oil for the first 24 hours, went "dead." The well had extended the southeast part of Champagnolle, Union County, Arkansas, a quarter of a mile south and east. Arrangements are being made to set tubing with packer in an effort to revive the well, whose action has been similar to several other tests in the vicinity. The Ohio Oil Company's W. N. Raulston, in Section 12-17-14, which started the spurt of activity in the southeast extension, is still flowing at the rate of 790 barrels of net oil with about the same amount of salt water. The same company's B. H. Raulston, in the same section, a quarter of a mile south of the W. N. Raulston, is pumping 150 barrels net oil while the Ohio Oil Company's Sam Oliver 1, in Section 7-17-13, a quarter of a mile east of the B. H. Raulston, is flowing 50 barrels net oil daily with about the same amount of salt water.

Champagnolle Wells

Eight of the 14 operations in Champagnolle are in the southeast part of the field. Bailey and Trimble are rebuilding derrick at El Dorado Realty 1, Section 7-17-13, after the drill stem stuck and the derrick was pulled in by a fishing operation. Lion Oil and Refining Company is coring at 3015 feet in El Dorado Realty 1, in the same section. Magna Production Company's El Dorado Realty 2-B, in Section 8-17-14, a quarter of a mile east of production, has had bottom re-cemented at 3084 feet after testing salt water at that depth. Ohio Oil Company's L. S. Adams 2, in Section 12-17-14, is waiting for cement to set after 6⅝-inch casing was set at 2995 feet. The same company is drilling at 2313 feet in M. H. Nash 1, in Section 7-17-13, and is waiting for 6⅝-inch casing to set in E. Raulston 1, in Section 12-17-14, after the well showed seven fourbles of oil in a drill stem test from 3024 to 3039 feet. Casing was set at 3009 feet with total depth of 3041 feet. Pure Oil Company is drilling at 1860 feet in M. H. Nash 1, in Section 7-17-13, while Rushing and associates are fishing at 1593 feet for a slip in Lynn 1, the same section.

The next test for the Mount Holly field, Ouachita County, where there are three small producers and two rigs operating, will be Arkansas Drilling Company's Crowley 1, in Section 27-15-18. This well is being cored at 2819 feet after testing salt water through the drill stem from 2813 to 2819 feet. Six miles due north of the discovery well of Mount Holly, Timberlake and associates are coring at 2714 feet in Wright 1, in Section 25-14-18.

A cave-in has occurred in Dixie Oil Company's Robertshaw 92, in Section 13-21-15, Caddo Parish, the lower Trinity sand test, now below 6100 feet. Work of cleaning out 30 feet of cavings and drill water at the bottom is under way. The well was bailed at 6126 feet May 27 with no increase in the gas obtained at 6124 feet, when between a half million and one million cubic feet were obtained. The latter test was made after going through two feet of hard cap rock and entering shells.

Four producers, including the Ohio Oil Company's Lynn 1, now "dead," added 960 barrels of new production during the week. Besides the producers there were eight gas wells and six failures, all of the latter being wildcats.

The only wildcat producer in Arkansas accounted for during the seven-day period

News From Rocky Mountain Fields

was Grimes Brothers' Hill 2, in Section 7-18-14, Hillsboro district, Union County, Arkansas, which is pumping 20 barrels of oil and 30 barrels of salt water daily from 2263 feet. Arkansas Natural Gas Corporation abandoned as a dry hole Bynum 2, in Section 12-10-24w, Johnson County, at total depth of 3125 feet. The same fate met J. O. Moore, Trustee's Union Sawmill 1, in Section 11-18-12, Lapipe district, Union Parish, which was abandoned at total depth of 3304 feet.

In North Louisiana there were two wildcat failures and one producer besides the failures in the Pine Island extension. R. L. Gay, Trustee's Bowman Hicks 3, in Section 14-7-14, Sabine Parish, was officially listed as a 15-barrel flowing well, with total depth of 2178 feet, while the same operator's Bowman-Hicks 2 (new series), in the same section, was abandoned as a salt water hole at total depth of 3621 feet. Enochs and associates, after drilling for almost one year in Curry 1, a wildcat, in Section 39-11-12e, Tensas Parish, tested salt water and abandoned the hole at 3765 feet.

Walker and associates report they are bailing a small quantity of 42 gravity oil from Antrim 1, a Bossier Parish wildcat, in Section 28-22-13, with total depth of 3048 feet. The oil rises about 20 feet between bailing operations. This test is near the famous Plain Dealing "flash in the pan" of a decade or more ago.

Lease Men Are Active On Structure

Great Falls.—Since the showing of oil obtained at 1150 feet in the U. S. Petroleum Company well on Black Horse Lake structure, six miles northeast of this city, lease men have been active in the area. The company owns leases on about 7000 acres, but other leases have been secured on thousands of acres north of the well, which is not drilled in at present, the work having been at a standstill four inches in the sand. This showing revived interest in the extreme southern end of the Sweetgrass Arch where many geologists have heretofore believed there was little chance for production because of the lack of closure.

Farmington, New Mexico.—An interesting San Juan County, New Mexico, test will be drilled by Josephine Greathouse this summer. She is an Oklahoma operator and has spotted a wildcat on North Stony Butte structure.

Farmington, New Mexico.—A deep test in the Hospah structure will be drilled this summer by H. L. Williams and associates. This district is proved for shallow production, but there has never been a deep test completed there.

Two Gas Lines to Be Laid From Kevin-Sunburst

Conrad, Montana. — This community, which has waited for more than a year for a franchise for natural gas to materialize into a project, now has two projects under way, and a race being run to lay the first line. Citizens Gas Company of Shelby was granted a franchise at a special election a fortnight ago, and M. S. Darling and E. B. Emerick already have a franchise more than a year old which they will exercise immediately. Gas for both lines is to be brought from Kevin-Sunburst.

Important Well in Oregon Basin Gets Shut-Off

Cody, Wyo.—Water which developed in the Cody Petroleum Company's Amsden-sand well in the Oregon Basin field has been easily shut off and it would appear that this well will start with a production of at least 1000 barrels. This is the most important discovery to have been made in this field since its first producing well was completed more than three years ago by the Ohio Oil Company.

Sand Draw-Casper

Casper.—Gas developed last year by the Producers & Refiners Corporation on Muskrat structure, in Fremont County, about 75 miles west of Casper, is to be marketed through the Sand Draw-to-Casper pipe line. The company has announced locations for two more wells to be drilled immediately.

Price Boost

Great Falls.—The posted field price for Kevin-Sunburst crude was advanced 10 cents per barrel last week by Ohio Oil Company; this makes the price $1.75 and, with the premiums offered, $1.85 per barrel, the highest prices paid for 30 gravity oil in the United States.

Bannatyne

Great Falls.—A refinery and pipe line for the Bannatyne field will be projected and built this summer by H. L. Withers and his associates through a newly-organized corporation. The development in Bannatyne field has been handicapped to a considerable extent by the lack of pipe line outlet.

Bannock County

Idaho Falls, Idaho.—Norton Bros. Oil & Gas Company report that its wildcat well on Arimo structure, 75 miles south of this city, has a showing of some oil and considerable gas in the Madison limestone. This well is in Bannock County, on the west side of March creek.

Sinclair Is Refused Line Tax Adjustment

Lincoln, Nebraska.—Sinclair Pipe Line Company has been refused a 50 per cent. reduction in its assessment on the pipe line which runs through Nebraska from Teapot Dome in Wyoming to Freeman, Missouri. The Sinclair corporation was taxed last year, in Nebraska, on a basis of $3,248,000, divided among the 13 counties through which the line runs. It has been paying for several years on an agreed valuation, which at one time was in excess of $3,500,000. It will be allowed a small reduction this year, perhaps $75,000 altogether, on account of engines and other equipment at pumping stations which have been removed from the state during the last year.

Wyoming Delegation To Attend Meet

Casper.—At a meeting of the executives of the Rocky Mountain Oil & Gas Association held in Casper, May 29, it was decided that the Wyoming delegation, so far as the association members were concerned, would be uninstructed at the convention conference to be held in Colorado Springs on June 10. B. B. Brooks, president of the assoication, R. S. Ellison, vice-president of the Midwest Refining Company, John McFadyen, the western general manager of the Ohio Oil Company, Patrick Sullivan, national republican committeeman, and A. J. Hazlett, editor of the Inland Oil Index, will compose the association's delegation. Governor Frank C. Emerson will appoint other delegates to the number of 12, which is Wyoming's quota at the meeting.

Salt Creek Shale

Casper.—Activity at present in the shale area in Salt Creek field is being carried on chiefly by the R. J. Mosher interests. One well is being drilled with Martin Falk of Minneapolis on the west side of the field; Mosher and Falk have a present daily capacity of more than 100 barrels of shale oil. Mosher is starting a well for Kentz & Evanoff of Denver on the west side this week. Production is anticipated around 1000 feet.

Noble County

Tulsa.—Prairie Oil & Gas Company's Waltermire 1, SW NE Section 33-21-1w, south of Perry in Noble County, Oklahoma, is preparing to test a showing of oil and gas encountered in a core at 3437 feet. A Halliburton tester has been run.

Magnolia Petroleum Company's King 1, SE SW Section 26-20-1w, is a new location in this district..

Texas Reaches New High Output Quarterly Report Shows

TEXAS produced more oil during the first quarter of 1929 than it has ever produced in a corresponding length of time. Statistics compiled by the State Comptroller's department from gross receipts tax report on crude credit the companies with having produced 69,541,834 barrels of oil during the quarter. This oil was valued at $63,520,489, which represents perhaps the lowest per barrel value figure recorded in the state since it became a major factor in the nation's supply of crude.

In the face of the existing unhealthy ratio between supply and demand of crude oil in the United States, the above figures do not reflect any cause for optimism with regard to the remaining six months of the year, notwithstanding that probabilities are favorable for many of the major operators to show splendid balance sheets for 1929.

Of the above total production for the state, more than 50 per cent. was produced by 10 companies. The value of oil produced by these 10 is nearly half that of all the oil produced in Texas during the first quarter. Out of the total, 35,096,837 barrels, with an evaluation of $28,791,310, was produced by the leaders.

Gulf Production Company, which has lead Texas producers since development of West Texas, continued to hold first place with a production of 7,173,134 barrels during the first quarter. This oil was valued at $6,155,502. Humble Oil & Refining Company was second in the amount produced with a record of 4,496,154 barrels, valued at $4,472,902. Second place among the producers during the last quarter of 1928 was held by The Texas Company.

In addition to the Humble Oil & Refining Company and the Gulf Production Company, four others produced above three million barrels of crude oil during the first quarter of this year. Southern Crude Oil Purchasing Company produced 3,984,993 barrels for third place. The Texas Company took fourth place with a production of 3,606,194 barrels. Shell Petroleum Corporation, one of the newer major producing companies operating in the state, took fifth place with a production of 3,555,869 barrels. Yount-Lee Oil Company, which was known only as a minor company in the state's production activities until its phenomenally successful exploitation of Spindle Top in 1926, ranked well among the majors during the first quarter with a recorded production of 3,076,092 barrels of oil with an average worth of a little more than a dollar a barrel.

There were three companies producing in the 2,000,000 barrel class during the first quarter of this year. Magnolia Petroleum Company recovered 2,726,878 barrels; J. K. Hughes Oil Company produced 2,475,114 barrels, and Pure Oil Company produced 2,220,558 barrels. The only company of the leading 10 Texas producers to produce less than 2,000,000 barrels was the Mid-Kansas Oil & Gas Company, with a production of 1,781,851 barrels.

Oklahoma Shows Production Loss for First Quarter

OKLAHOMA'S production of crude oil for the first quarter of the current year showed a loss in comparison with the last quarter of 1928, according to reports from the Oklahoma Corporation Commission. During the first three months of this year, Oklahoma produced 47,389,982 barrels, which, including valuation of gas produced and royalty, had a value of $73,407,932. During the last quarter of 1928 Oklahoma produced 68,858,209 barrels.

The above figures clearly indicate that while Oklahoma's crude situation still may be acute, its predicament is not as serious as it was six months ago. A shortage of 20 million barrels in the first quarter of 1929, compared with the last quarter of 1928, is at least a step toward stabilization of the oil market within Oklahoma, which has long been one of the weakest links in the nation's chain of price structure.

Out of the 47,389,982 barrels produced in Oklahoma during the first quarter of 1929, considerably more than half was produced by the state's 10 leading companies. They produced 27,317,575 barrels, valued at $38,964,986.

Magnolia Petroleum Company maintained its lead established during the last quarter of 1928 when it produced 4,021,090 barrels the first quarter of this year. Magnolia Petroleum Company's oil was valued at $5,352,252, including gas production and royalty. It likewise was the only company in Oklahoma in the four million barrel class.

There were three producing companies in the three million barrel class fighting for second, third and fourth place in the state's production columns. Prairie Oil & Gas Company, long an important market factor in the Mid-Continent, took second place with a production of 3,988,914 barrels. Gypsy Oil Company, operating subsidiary of the Gulf Oil Corporation in Oklahoma and Kansas, was third with a production of 3,595,427 barrels, while Sinclair Crude Oil Purchasing Company was fourth with a production of 3,185,572 barrels.

Oklahoma had three producing companies in the two million barrel class during the first quarter of this year. Pure Oil Company produced 2,751,582 barrels, a substantial increase over its production for the last quarter of 1928. Carter Oil Company, which produced roughly 3½ million barrels in the last quarter of 1928, registered a decrease in production the first quarter by recovering only 2,718,560 barrels. Independent Oil & Gas Company was seventh place with a production of 2,274,593 barrels, a slight decrease from its production for the preceding quarter.

LEADING PRODUCING COMPANIES OF OKLAHOMA, FIRST QUARTER, 1929

Company	First Quarter 1929	Value of First Quarter's Oil	Last Quarter 1928
Magnolia Petroleum Company	4,021,090	$5,352,252	4,825,136
Prairie Oil & Gas Company	3,988,914	$5,630,025	3,852,645
Gypsy Oil Company	3,595,427	$5,286,529	4,342,644
Sinclair Crude Oil Purchasing Company	3,185,572	$4,521,697	3,575,572
Pure Oil Company	2,751,582	$3,829,292	1,915,527
Carter Oil Company	2,718,560	$3,971,328	3,508,225
Independent Oil & Gas Company	2,274,593	$3,202,795	2,650,411
Indian Territory Illuminating Oil Company	1,890,437	$3,052,274	1,239,367
Shell Petroleum Corporation	1,563,972	$2,249,434	1,378,773
The Texas Company	1,327,428	$1,868,813	1,449,662
Totals	27,317,575	$38,964,986	
Total oil produced by all Oklahoma companies during the first quarter of 1929			47,389,982
Value of the oil, including gas			$73,407,932

Texas Quarterly Production Report First Quarter, 1929

Leading Producing Companies of Texas, First Quarter, 1929

Company—	First Quarter 1929	Fourth Quarter 1928	Third Quarter 1928	Second Quarter 1928	First Quarter 1928
Gulf Production Company	7,173,134	6,300,385	6,250,518	6,319,764	6,585,359
Humble Oil & Refining Company	4,496,154	3,383,655	3,464,065	4,549,109	3,895,649
Southern Crude Oil Purchasing Company	3,984,993	2,903,917	2,606,646	2,355,767	1,371,203
The Texas Company	3,606,194	4,067,572	3,991,443	3,293,960	2,957,020
Shell Petroleum Corporation	3,555,869	3,358,633	4,096,142	3,178,997	2,818,691
Yount-Lee Oil Company	3,076,092	3,210,411	3,237,565	3,148,550	2,754,357
Magnolia Petroleum Company	2,726,878	3,031,049	2,957,372	2,847,060	3,091,216
*J. K. Hughes Oil Company	2,475,114	.....	.....	.....	.....
Pure Oil Company	2,220,558	1,851,071	1,902,587	1,851,071	1,107,438
Mid-Kansas Oil & Gas Company	1,171,851	1,611,634	1,365,334	1,611,634	782,805

Total of 10 leading producing Companies in Texas for first quarter, 1929 ..... 35,096,837 barrels
*Evaluation of same $28,791,310.00
Total production of all Texas producing companies for same period ..... 69,541,834 barrels
Evaluation of same $63,520,849.00

*J. K. Hughes Oil Company was not listed among th 10 leading companies until the past quarter. An evaluation of oil produced by J. K. Hughes Oil Company dur ing the first quarter of this year was not available at time of publication.

Name, Address—	Barrels	Amount
Adamson, Peter, Jr., Tulsa	.....	1,579
Adamson, Peter, Jr., Tulsa	.....	1,087
Artex Oil Company, Wichita Falls	1,738	2,329
Alamo Oil Co., Brownwood	472	566
Adams & Lyles, (12-31-28), Lockhart	22,772	32,270
Alworth Stevens Hild Company, New York	5,473	4,943
Arnold & Frazier, Putnam	389	623
Andrews, W. R. et al, Putnam	1,090	1,386
Atwood, Harry, et al, Ranger	2,185	2,615
Arnold, J. L., et al, Eastland	1,699	1,898
Associated Oil Company, Tulsa	1,252	1,484
Ama-Gray Oil Co., Amarillo	3,093	3,480
Acorn Oil Co., Beaumont	7,854	9,190
A. & P. Production Company, Houston	57,241	65,058
Atlas Oil Corporation, Humble	2,423	2,908
Alaska, The Petroleum Company, Amarillo	1,089	1,144
Alamosa Oil Company, Amarillo	36,887	32,850
Abbott, R. W., Beaumont	1,296	1,555
Ashe, The Syndicate, Fort Worth	739	923
Ailes, O. T., Wichita Falls	702	906
American Refining Properties, R. M. Waggoner Estate, Wichita Falls	1,729	2,393
Abraham, Earl, Bridgetown	643	910
Ailes, J. W., Wichita Falls	475	602
Atlas Production Co., Burkburnett	2,004	2,415
Adams, Walter B., Wichita Falls	425	554
Ascot, The Company, Wichita Falls	8,559	12,724
All-American Oil & Gas Co., Oklahoma City	52	65
Atlas Production Co., Burkburnett	1,041	1,593
American Refining Properties, M. J. Bashara Estate, Wichita Falls	3,283	4,366
Allday Oil Corp., Wichita Falls	5,328	7,098
Aarco Oil & Gas Company, Baltimore	8,382	11,681
Arkansas Fuel Oil Company, Shreveport	6,547	8,205
American Refining Properties, Creditors' Committee, Wichita Falls	8,446	10,472
American Maracaibo Company, New York	299,901	240,615
American Refining Properties, N. B. Chenault Estate, Wichita Falls	1,484	2,035
Abercrombie, J. S. Company, Houston	125,252	142,902
Amarillo Oil Company, Amarillo	1,728	1,481
Arco Oil Company, Wichita Falls	18,415	15,865
Adams & Prince, Amarillo	21,341	26,180
Anchor Oil Company, Dallas	1,067	1,342
Apple-Brandeberry Oil Co., Wichita Falls	11,814	15,656
Allaun, Wm. E. for Atlantic Keystone Petroleum Co., Bolivian Petroleum Corp., Fort Worth	1,504	1,203
Atkinson & Sandefer Oil Corporation, Breckenridge	14,696	20,588
Andrews Petroleum Corporation, New York and San Antonio	4,573	5,004
American Refining Properties, Wichita Falls	40,545	45,940

Name, Address—	Barrels	Amount
Amerada Petroleum Corporation, Tulsa	597,163	448,439
Atlantic Oil Producing Company, Dallas	1,616,288	1,124,056
Albany Oil Co. and Hope Oil and Gas Co., Breckenridge	4,031	4,857
Alworth, T. J., Ranger	370	408
Ames, E. W., et al, Cisco	1,574	2,192
Birk, C. E. & C. L. Kelley, Iowa Park	155	191
Brannon & Murray, Cisco	3,520	4,664
Big Lake Oil Company, Pittsburgh	1,189,013	1,392,001
Bryant, M. D., et al, San Angelo	1,692	1,120
Barkley & Conway, Ranger	4,551	6,748
Burkburnett Production Oil Trust, Baltimore	604	827
Badger, The Oil Company, Amarillo	7,794	9,116
Barkley & Meadows, Wichita Falls	55,469	73,749
Beaver Oil Corporation, Oklahoma City	8,103	8,165
Bell Oil & Gas Company, Tulsa	35,079	35,242
Bullington-Clark, et al, Wichita Falls	7,731	6,059
Bonchil, The Company, Wichita Falls	5,132	7,190
Bexata Oil Company, San Antonio	1,508	1,647
Bridwell & Mayfield, Wichita Falls	6,618	10,374
Beams, Drew, Okmulgee	1,059	1,372
Burke-Greis Oil Company, Tulsa	2,209	3,131
Brady Bros., Minerva	1,325	1,636
Bashara, J. F., Houston	7,161	8,594
Bridwell Oil Company, Wichita Falls	13,789	13,281
Barnes, J. B., Electra	2,905	3,547
Barnes, J. B., Receiver, et al, Electra	1,002	1,313
Brownwood Producing & Refining Co., Brownwood	1,104	1,361
Black Diamond Oil Co., Amarillo	180	172
Bennett, Mills Production Company, Houston	33,866	37,372
Big Indian Oil & Development Company, Gainesville	1,179	1,462
Black-Pearson & Hudson, Corsicana	3,675	2,940
Bynum & Palmer, Rockdale	164	203
Barkley & Meadows, Fort Worth	14,036	5,597
Benedum-Trees Oil Company, Pittsburgh	57,481	51,860
Blue Bonnett Petroleum Corporation, San Antonio	917	965
Bowman Oil Company, Rockdale	890	1,126
Barkley, T. F., Sour Lake	5,322	6,386
Burk Burnett Jr. Oil Co., Fort Worth	286	404
Burk Burnett Jr. Oil Co., Fort Worth	318	452
Burton McKee Oil Corp., Strawn	none	none
British American Oil Producing Co., Wichita Falls	7,586	10,336
Baird Oil Co., Putnam	213	254
Bullington, Lee, Pendleton & Bullington, Wichita Falls	15,580	21,091
Bass & Dillard, Wichita Falls	9,842	12,493
Baldwin, F. C., et al, Fort Worth	1,449	2,029
Bradstreet, L. G. Company, Fort Worth	20,428	28,262
Bonner, J. H. S., et al, Wichita Falls	5,688	7,522
Black Cat Oil Co., Electra	986	1,291
Brazos River Gas Company, Wichita Falls	485	777

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A. F. Keck & Co.
Butler, Pa.

Acme Tool Co.,
Breckenridge, Texas

WICKWIRE SPENCER UNIFORM WIRE ROPE

Name, Address—	Barrels	Amount
Barnsdall Oil Company, Tulsa	38,009	45,014
Burris, Joe D., et al, Cross Plains	1,620	2,176
Bartlett Production Company, Rockdale	1,139	1,429
Bourbon Royalty Co., Dallas	5,988	3,623
Bevering, A. H., et al, Henrietta	1,953	2,428
Broderick, A. J. & George Calvert, Fort Worth	467	678
Biel, Wm. A., Von Ormy	32	36
Big State Oil Corporation, Dallas	204	256
Buttram Petroleum Corporation, Oklahoma City	43,163	62,376
Barbara Oil Company, Oklahoma City,	3,063	4,418
Borealis Oil Company, Oklahoma City	3,930	5,341
Bartlett, Wm. Co., Electra	343	515
Bohner, C. J., et al, Burkburnett	10,563	13,880
Brinkley Producing & Refining Co., Pittsburgh	342	408
Bohner, Crenshaw & Whitehill, Burkburnett	8,241	8,950
Britton Gordon & Wickens, Strawn	434	605
Bailey, Carl B., Wichita Falls	7,670	10,555
Bailey, Fannie, Wichita Falls	206	287
Bailey, Fannie, Wichita Falls	1,239	1,582
Blucher Oil & Gas Co., Gainesville	160	184
Bowers Oil Company, A Trust Association, Vernon	1,231	1,567
Biggs Oil & Gas Co., McKinney	1,088	1,556
Briggs, R. F., C. O. Smith & T. C. Steiner, Corsicana	105	134
Brownlee-Pope Oil Co., Austin	2,621	3,290
Bynum, W. W., Estate, Rockdale	946	1,189
Braden Company, Eastland	2,206	3,014
Barkley Crotty Six and Little, Ranger	928	1,134
Barkley & Crotty, Ranger	4,675	6,233
Barkley & Meadows, et al, Waggoner "D" Lease, Wichita Falls	9,303	11,592
Barkley & Meadows, et al, Waggoner "C" Lease, Wichita Falls	41,155	51,977
Bridwell & Heydrick, Tr., Wichita Falls	2,327	3,341
Boller, C. W., Wichita Falls	6,860	9,561
Breckenridge Gasoline Company, Toledo	28	33
Blair & Kell, Dallas	1,357	1,542
Brooks & Hanlon, Inc., Tulsa	622	756
Beggs, Geo. Strip, Fort Worth	2,009	3,248
Brown, Mrs. Carrie L., et al, Orange	17,711	21,275
Brown, Dr. E. W., Estate, Orange	788	946
Baker, James Blair, Jr., and C. F. Camp, Trs., Wichita Falls	6,104	7,782
Baker, James Blair, Jr.,and C. F. Camp, Trs., Wichita Falls	58,395	73,906
Burns, L. T., Wichita Falls	42,773	59,329
Baker & Pardue, Breckenridge	2,414	3,268
Baker, J. A. & Mollie B., Breckenridge	7,062	8,756
Baker, Mollie B. and Fred R., Breckenridge	1,448	1,882
Bain, L. L., Iowa Park	970	1,208
Bain & Clark, Iowa Park	575	688
Bolin & Lindsay, Graham	3,119	4,978
Bolin & Lindsay, Graham	1,189	2,200
Bruce, A. D., Brownwood	718	855
Bluebonnett Oil Co., Wichita Falls	710	961
Belva Oil Co., Eastland	161,452	257,812
Cranfill Bros. Oil Co., Dallas	179,148	92,252
Corpus Christi Oil Co., Corpus Christi	434	347
Chandler, E. B., Jacksboro	926	1,078
Canary, S. C., et al, Tulsa	395	510
Cohen, Aaron,Baltimore	7,392	10,677
Coppock & Coleman, Iowa Park	29,997	41,872
Consolidated Oil Co. of Texas, Wichita Falls	64,730	82,432
Champlin Refining Co., Enid	39,239	34,281
Clear Lake Oil Co., Rockdale	1,435	1,811
Caltex Oil Co., Spokane	337	323
Charter Oil Co., Brownwood	26,053	37,654
Cockrell McIlroy Oil Co., Inc., Amarillo	74,572	85,715
Cromwell, Carl G., Best	9,525	6,280
Church & Weekly & Fields, Fort Worth	31,787	20,661
Clark, R. R., Wichita Falls	16,345	22,815
Central Texas Refining Co., Corsicana	17,393	22,502
Culbertson Bros. Company, Fort Worth	5,151	3,841
Crosscut Corporation of Fort Worth, Fort Worth	1,108	1,540
Clarkson, Williams, Jr., Corsicana	2,891	3,753
Cornhusker Oil Co., Lincoln	2,078	1,662
Crown Oil & Refining Co., Houston	14,611	17,534
Crown Central Petroleum Corporation, Houston	45,847	37,290
Coffield & Hale, Rockdale	2,140	2,723
Collins, J. L. & Company, Corsicana	1,861	1,884
Clay, J. D., Houston	1,889	2,096
Central Oil Company, Cameron	3,887	4,180
Cosden & Co., Inc., Fort Worth	417,579	357,462
Chapman, P. A. Estate, Waxahachie	13,442	16,983
Cowling & Newell Oil Co., Burkburnett	234	248
Clem Oil Company, Houston	290	261
Continental Oil Co., Wichita Falls	552,385	634,258
Cunningham, E. J., et al, Coleman	20,196	21,695
Cisco Oil Company, Tulsa, Okla.	27,629	32,694
Cullen, J. R., et al, Houston	14,470	16,162
Crown Oil Corporation, Brownwood	2,371	2,728
California Company, Colorado	1,352	925,506
Columbia Petroleum Co., Laredo	8,543	6,835
Capitol Oil Company, Orange	741	890
Coffey & Graham, Wichita Falls	348	422
Crosbie, J. E., Inc., Tulsa	14,207	13,040
Carter, Roy I., Wichita Falls	14,721	9,113
Coyle-Concord Oil Co., San Antonio	53,223	35,491
Camp Oil & Gas Company, Wichita Falls	1.072	1,400
Cole, W. C., Wichita Falls	1,866	2,534
Caruthers Co., San Antonio	1,830	1,857

"Big Boy" Tugged *with Might and Main* ---*but* TRIMO *Stood the Test*

MR. F. A. GRAY

OUT around Tulsa, Oklahoma, they allow that "Big Boy" Gray is a mighty strong man. Six feet six in his stocking feet — and 240 pounds of solid beef!

We gave him a stock Trimo "four footer" and told him to give it the works—told him to try and break it, bend it, spring the frame.

And he sure tried!

He tugged, twisted, yanked and heaved—used all his muscle, all his weight. But Trimo stood the test.

Here are two things to note about this test:

1. ***Gray is a whole lot stronger than the average wrench user.***
2. ***And Gray was TRYING TO BREAK THAT WRENCH.***

The all-steel construction of Improved and Mightier Trimo pipe wrench gives it the reserve strength to stand the strain with extra strong men and extra heavy work. Trimo is unquestionably the safest and strongest wrench of its kind ever made.

Made by

TRIMONT MFG. CO., INC.

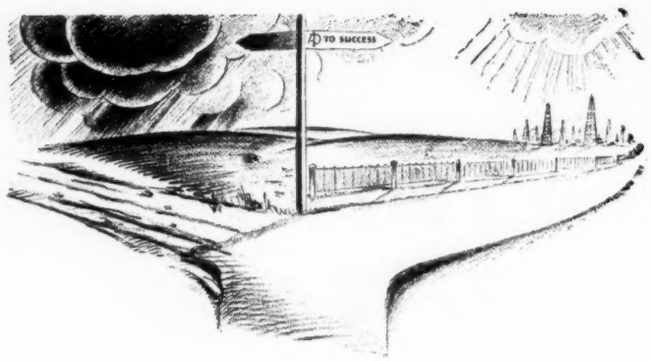
Roxbury (Boston), Mass.

Note: This actual service test was conducted under the supervision of a representative of one of the leading oil publications of the country. Mr. Gray was told to break the wrench if it was humanly possible to do so.

TRIMO Pipe Wrench

All Steel for Strength

Replaceable Jaws for Lifetime Wear



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Plain and Upset Casing Gages
Rotary Taper Joint Gages, Line Pipe Gages
Sucker Rod Gages, Fishtail Bit Gages

Name, Address—	Barrels	Amount
Cashdollar & Snyder, Brownwood	231	256
Cosa Oil Company, Cisco	279	395
Craig & Lowrie, Pittsburgh	1,623	1,680
Camel Oil Company, Pampa	1,601	2,192
Connell-Wixson-Frazier, El Dorado, Kans.	1,715	1,886
Corpus Christi Oil Co., Corpus Christi	429	429
Cullen, H. R. et al, Houston	16,318	19,418
Caldwell, John W., Wichita Falls	2,675	3,578
Chapman, O. H., Waxahachie	229	276
Cushing Refining & Gasoline Co., Cushing, Okla.	7,133	4,636
Crabb & McNeel, San Angelo	1,030	1,435
Cohen, Aaron, Baltimore	6,963	11,384
Cable, Jo H., Wichita Falls	1,222	1,674
Carey, E. S., et al, Wichita Falls	137	144
Carey, E. S., et al, Wichita Falls	780	952
Canyon Oil & Gas Company, Inc., Cross Plains	1,352	1,944
Culbertson Company, Wichita Falls	11,847	16,777
Cranfill Bros. Oil Company, Wichita Falls	3,911	5,422
Curtis, Jas. A., Wichita Falls	1,945	2,686
Clark, C. W., Wichita Falls	72	89
Crenshaw, Albert, Wichita Falls	1,852	2,479
Cosden, J. S., Inc., Fort Worth	5,716	7,385
Chestnut & Smith Corporation, Tulsa	6,168	8,360
Collier, J. W. and E Mabel, Tipton, Okla.	439	507
Carlin, W. W., Ranger	180	272
Carlin and Tobin, Ranger	505	747
Christi Bros., Wichita Falls	8,668	11,776
Conway Bros. and Gholson, Ranger	110	139
Conway Bros., Ranger	2,178	3,292
Cox, Edwin B., Ardmore, Okla.	1,849	2,469
Conner Son & Cloughley, Gotebo, Oklahoma	11,972	16,517
Continental Supply Company, St. Louis	452	571
Chenault, W. L., Amarillo	648	895
Canadian River Oil Co., Amarillo	15,525	13,369
Canadian River Oil Co., Amarillo	12,758	9,568
Canadian River Oil Co., Amarillo	10,842	8,893
Canadian River Oil Co., Amarillo	8,529	7,273
Canadian River Oil Co., Amarillo	7,730	7,339
Canadian River Oil Co., Amarillo	5,431	5,766
Cuno, Mrs. Bertha, (6-30-27), Moran	5,480	6,724
Carey, C. W., Wichita Falls	4,973	5,222
Callihan, Geo., Albany	1,428	1,739
Carter Development Co., Fort Worth	1,428	1,739
Campbell & Wills, Burkburnett	1,146	1,540
Duho Oil Company, Houston	222	350
Dixie Oil Company, Inc., Shreveport	90,786	59,048
Duke-Langford Oil Company, Wichita Falls	5,404	4,323
Dudley, G. S., Iowa Park	1,665	2,402
Danciger Oil & Refining Co. of Texas, Fort Worth	88,811	106,711
Double Five Oil Company, Amarillo	1,461	1,297
Derby Oil Company, Wichita	24,267	29,103
Davis, Caroline A., Somerset	365	383
Dixon Creek Oil Company, Inc., Amarillo	87,314	78,978
Delmar Oil Company, Bartlesville	7,551	8,974
Dale & Crawford, Electra	684	922
Dunaway, J. E., et al, Wichita Falls	1,809	2,472
Duncan, J. W., Wichita Falls	1,133	1,538
Dean, H. R., Tulsa	31,914	33,543
Dunigan Bros., Breckenridge	385	479
Dunigan Bros., Breckenridge	762	750
Dorian, R. P., Wichita Falls	19,393	25,211
Dillon & Glasscock Company, San Antonio	528	512
Dunbar, S. M. No. 1, Houston	...	...
Douglas Oil Company, Tulsa	1,963	1,774
Davis, Beatrice H., Admnx. L. R. Davis Est., Tulsa	77	92
Dean Oil Co., Burkburnett	500	615
Dominion Oil Company, Tulsa	1,337	1,689
Dennis, J. S., Moran	1,604	2,001
Dale-Knotts Oil Co., Wichita Falls	245	341
Dentsen, B., Tr., Beaumont	2,257	2,709
Derby, Haines & Williams, Wichita	2,949	2,415
Derby, A. L. & E. A. Haines, Wichita Falls	8,249	8,429
Dallas Petroleum Company, Houston	274	361
Dayton Oil Co., Dayton	149	179
Dunlop, Robert, Ponca City	11,386	15,511
Duffield & Howard Oil Company Tulsa	749	866
Douglas Production Company, Electra	2,106	2,821
Dalton, Jack Oil Co., Fort Worth	1,855	2,468
Dull Earls Texas Company, Albany	72,993	96,838
Dale Oil Corporation, Wichita Falls	5,131	7,734
Duho Oil Company, Houston	181	217
Dixie Drilling Company, Inc., Fort Worth	194	299
Douglas Brothers Oil Company, Electra	3,145	4,392
Duquesne Oil Corporation, Eastland	478	714
Draper, W. H., Burkburnett	374	474
Draper & Sanders, Burkburnett	672	860
Engel, E. A., Albany	4,319	5,451
Erickson, Selma E., Wichita Falls	90	122
Ellis & DuBose, Fort Worth	994	1,151
Earnest Oil Company, Rockdale	496	640
Emrick Lease, Minerva	322	384
Ellis & Anderson, San Antonio	136	144
Eastland Oil Company, Fort Worth	122,592	89,907
Eurno Oil Corporation, Abilene	301	363
Easton, E. S., Wichita Falls	1,577	2,157
Eddy Oil Company, Beaumont	721	866
Electra Production Co., Inc., Electra	997	1,321
Erie Investments Limited of Texas, Rockdale	570	655
Ellis & Lancaster (9-30 and 12-31-28), Beaumont	134	161

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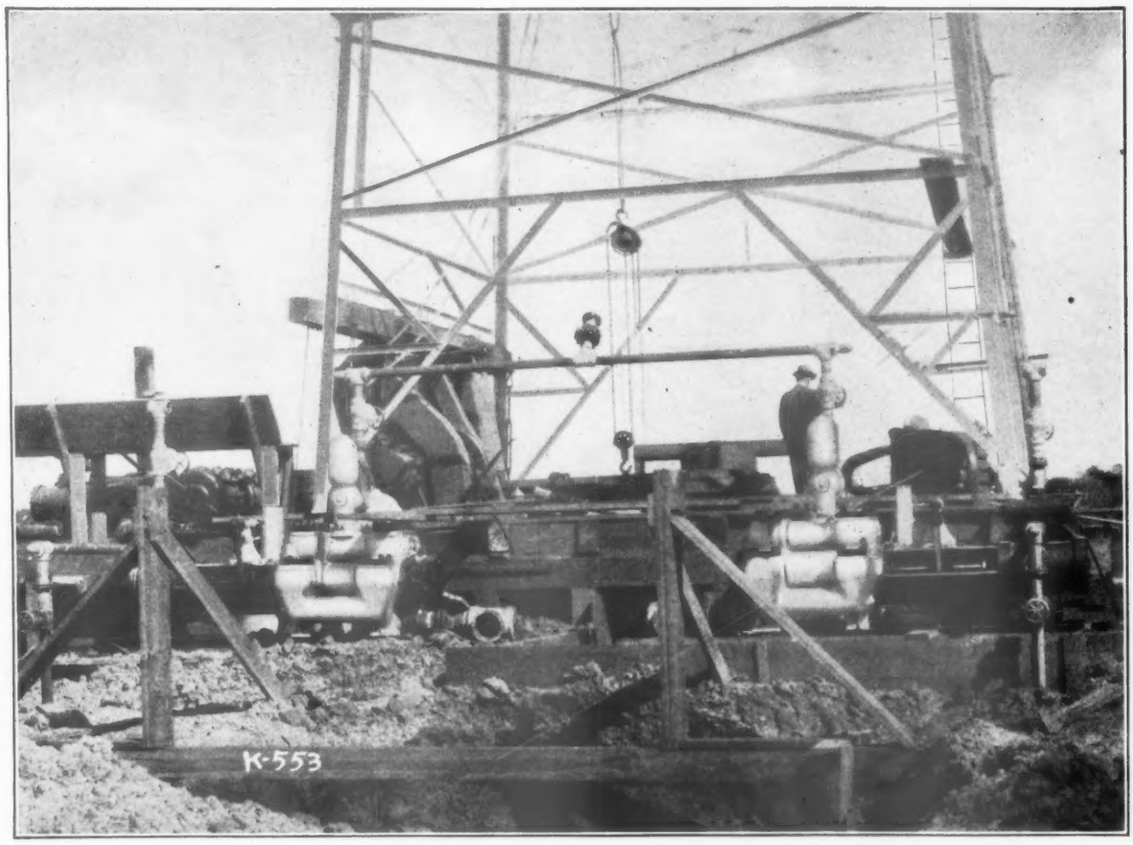

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XUM

Name, Address—	Barrels	Amount
Ellis & Lancaster, Beaumont	705	844
Eggers, J. E., Trustee, San Antonio	641	641
East Batson Oil Co., Batson	17,733	21,280
Ellis & DuBose, Fort Worth	3,177	3,808
Ellis & Anderson, San Antonio	159	183
Empire Gas & Fuel Company, Bartlesville	287,045	303,177
Empire Gas & Fuel Co., (3-29), Bartlesville	23,636	28,924
F. H. E. Oil Company, Sherman	7,571	6,513
Fleming and Kimbell, Sherman	4,357	3,306
Fain-McGaha Oil Corporation, Wichita Falls	529,205	697,159
Fountain Production Co., Saratoga	1,866	2,240
Farlyn Oil Company, Houston	14,644	8,820
Fisher, J. A., Wichita Falls	1,041	1,441
Flynn, W. B., Beaumont	3,935	4,766
Frontier Oil Company, San Antonio	10,606	12,033
Ferguson & Watson, Electra	1,128	1,544
Fort Bend Oil Co., Gordon & Sharp and H. B. Gordon, Jr., Houston	27,420	30,841
Fox & Adams, Burkett	13,324	15,062
Fogle Oil Company, Kinqua, Pennsylvania	1,653	1,988
Fitzgerald Syndicate Lease, Wichita Falls	156	206
Falls Production Co., Wichita Falls	6,232	8,389
Ferguson, W. R., Wichita Falls	720	991
Farish & Ireland Lease, Houston	5,835	7,002
Finston, Mark, Tulsa	2,128	2,898
Froster-Townsend-Ungren-Frazier, Putnam	498	755
Forest Oil Corporation, Fort Worth	23,682	38,795
Forest Oil Corporation, Fort Worth	27,541	42,439
Forest Oil Corporation, Fort Worth	81,910	114,671
Forest Oil Corporation, Fort Worth	60,606	85,398
Forest Oil Corporation, Fort Worth	39,486	56,568
Fresno Oil Company, Wichita Falls	31,548	42,274
Freeman & Grebin, Wichita Falls	1,092	1,540
Four Oil Company, Wichita Falls	4,298	5,867
Freeman-Hampton Oil Corp., Wichita, Falls	5,005	7,002
Freeman-Hampton Oil Corp., Wichita Falls	707	1,006
Freeman & Grebin, (Hennig) Wichita Falls	7,642	9,513
Freeman & Grebin, (Alexander), Wichita Falls	781	888
Freeman & Grebin, (Alexander), Wichita Falls	926	1,265
Franklin, Wirt, Ardmore	1,076	1,492
Fort Ring Oil & Gas Company, Fort Worth	610	950
Fain, L. B., Comanche	837	921
Gwinnup, H. G., Fort Worth	601	891
Godfrey, F. L., Enid	75	98
Golden, A. C., Iowa Park	628	812
Golden, A. C., Iowa Park	3,130	4,255
Gulf Production Company, Houston	7,173,134	6,155,502
Group No. 1 Oil Corporation, Big Lake	449,762	613,689
Gates Oil Company (Wyo.), Littleton, Colorado	5,200	5,130
Gunn Production Co., Cross Plains	1,485	1,892
Gilbert Company, Beaumont	8,709	10,451
Gopher Oil Company, Amarillo	763	676
Goldelline Oil Corporation, Oklahoma City	8,103	8,165
G. & K. Production Co., San Antonio	1,306	1,432
Gandy, L. O., Wortham	1,454	1,756
Graham & Lash, Cisco	637	765
Godley Oil & Gas Co., Dallas	29,696	27,219
Gray and Adams, Inc., Gainesville	1,902	1,978
Gray and Adamas, Inc., Gainesville	1,320	1,347
Gray and Adams, Inc., Gainesville	1,300	1,282
Gainesville Oil and Development Co., Gainesville	918	863
Gilliland, C. W., Wichita Falls	2,442	3,293
Ginter-Jones Oil Co., San Antonio	513	577
Ginter-Lange Oil Co., Inc., San Antonio	1,441	1,680
Golden West Oil Company, San Antonio	46,329	42,982
Gwynn-Boyd Drilling Company, Wichita Falls	2,961	2,838
Glasscock Leasing Syndicate, San Antonio	1,789	1,942
Grayce Oil Company, Wichita Falls	23,205	31,094
Galvez Oil Corporation, Tulsa	3,863	4,965
Golding, Dudley S., Wichita Falls	13,795	17,244
Gardner, Collins & Dunigan, Pampa	895	1,173
Gilman & McMurray, Cisco	4,990	7,430
Gilman and Conway Bros., Ranger	5,072	7,503
Gandy & Peyton, Wortham	2,783	3,324
Guthrie, Cole & Ferguson, Wichita Falls	692	866
Grady, D., Electra	540	785
Granite Oil & Gas Co., Ridgeway, Colo	351	503
Gordon Oil Company of Texas, Logan, Ohio	81	103
Gray, K. C., Vernon	5,294	6,849
Gladis Oil Co., Saratoga	2,840	2,840
Gaither Production Company, Rockdale	1,089	1,379
Gibson Oil Corporation, Amarillo	44,659	50,494
Glass Bros., Rosebud	806	990
Greene Production Company, Fort Worth	44,482	49,087
Gholson, Jno. M., Ranger	9,872	13,608
Gates Oil Company, Ardmore	2,902	4,341
Gallagher & Lawson, Desdemona	155	193
Glenridge Oil Corporation, St. Louis	3,323	4,464
Gardner Bros. & Collins, Wichita Falls	960	1,238
Gardner, Wilson & McCaldin, Wichita Falls	1,280	1,771
Gilliland-Rosser et al, Wichita Falls	32,152	44,727
Gilliland, C. W. and Associates, Wichita Falls	14,318	22,426
Gwynn, P. F., Indv. & Agt. for J. F. Boyd, Wichita Falls	1,330	1,869
Gwynn, P. F., Wichita Falls	8,966	13,082
Golding & Cochran, Wichita Falls	15,030	18,787
Gates-Bacon-Lea, Wichita Falls	7,139	9,043
Galtex Production Company, Waxahachie	2,304	3,237
Grady, D., Electra	511	657
Great Lakes Oil Co., Wichita Falls	2,421	3,632
Gutzman, Harry, Fort Worth	2,664	1,880
Gutzman, Harry, Fort Worth	1,154	854
Howell, M. L., Lohn	322	396
Hamilton, Walter R., Tr., San Antonio	4,285	5,313
Hoffer Oil Co., Fort Worth	1,506	1,981
Hoffer Oil Corporation, Fort Worth	845	881
H-Y Oil Company, Inc., Fort Worth	11,775	15,442
H. B. J. Oil & Gas Trust, Baltimore	2,182	3,033
Hedges, F. M., Wichita Falls	454	650
Hughes, J. K., Oil Company, Mexia	2,475,114	*
Hamilton, W. L., Burkburnett	645	990
Horn, T. W., Houston	2,969	3,563
Huber, J. M. Company of Louisiana, Inc., Breckenridge	1,617	1,492
Halmack Oil Company, Dallas	1,222	1,645
Hanover Co., Inc., Wichita Falls	5,827	7,375
Humphreys Corporation, Houston	197,080	221,789
Humphreys Brothers, Inc., Houston	2,471	3,614
Harris & Simmons, Tulsa	7,746	4,647
Holmes and Huey, Whittenburg	2,131	2,010
Holmes Brothers, Amarillo	3,630	3,637
Holmes-Riley, Amarillo	4,011	4,272
Hunter, T. F., Wichita Falls	10,928	14,914
Hunter, T. F., Wichita Falls	10,928	14,914
Hammon & Heyser, Wichita Falls	16,635	21,994
Hammon & Heyser Special Account, Wichita Falls	12,213	17,282
Hammon, W. H., Wichita Falls	55,794	79,789
Holbrook & Woods, Wichita Falls	51,068	70,722
Herbert Oil Company of Texas, Fort Worth	6,209	6,309
Hutton Oil Corporation, Cisco	14,231	16,616
Hardie, J. M. & Company, Sour Lake	944	1,133
Houston Production Company, Houston	14,255	16,718
Hill & Dowell, Batson	11,886	14,263
Hobbs Oil Company, Tulsa	2,134	2,821
Hoppes, W. T., Burkburnett	431	434
Hill, W. R., Trustee, Burkburnett	230	323
Hope Oil and Gas Company, Fort Worth	11,798	15,259
Humble Oil and Refining Company, Houston	4,496,154	4,472,902
Homaokla Oil Company, Oklahoma City	4,369	5,557
Houston Gulf Gas Company, Houston	18,548	17,793
Harvey, R. A., Houston	1,252	1,328
Home Oil & Gas Co., Inc., Albany	1,894	2,325
Houghland Production Co., Dallas	4,280	5,062
Hyer, Fred, Fort Worth	10,398	8,593
Houston Oil Company of Texas, et al, Houston	78,206	67,460
Hammond, J. G., Fort Worth	226	329
Hedrick-Camp Drilling Company, Wichita Falls	3,079	3,296
Herrmann et al, Pampa	51,308	60,124
Hefley-McIntosh & Thomas, Cameron	653	793
Hamon, Jake L., Ardmore	7,952	10,699
Hammun Oil Co., Eastland	349	439
Howard, Duffield & Berlin, Tulsa	1,177	1,180
Hyde Production Co., Houston	2,992	3,591
Hyde, George, Houston	5,304	5,814
Huber, J. M. Company of La., Inc., Breckenridge	79	91
Huffman Oil Corporation, Amarillo	7,620	6,851
Hines, Harry, Wichita Falls	1,693	2,323
Harrison Oil Company, Houston	40,208	54,250
Hanover Co., Inc., Wichita Falls (Final)	.....	403
Hitchman & Howard, Inc., San Antonio	2,575	2,981
Hamilton & Martin, Wichita Falls	2,146	2,790
Helvetia Oil Company, San Antonio	12,562	13,302
Hickey, T. J., et al, Corsicana	57	76
Hart Oil Corporation, Fort Worth	260	334
Hobbs, Henry, Wichita Falls	4,597	6,254
Handrick, A., Moran	239	258
Hemby, J. M., Electra	1,165	1,472
Hinson, G. D. & R. V., Tidwell, Graham	3,318	4,277
Hughes, Wm. K., Tr., St. Louis	802	1,010
Hardy Oil Company, Wichita Falls	3,169	4,419
Hoffman & Page, Eastland	8,917	12,480
Herbert Oil Company of Texas, Tr., Fort Worth	5,223	6,969
Hickok Producing and Development Co., Toledo	668	888
Hanlon Gasoline Company, Tulsa	2,996	3,862
Howard Petroleum Corporation, Tulsa	759	867
Hueco-Ranger Oil Co., El Paso	405	571
Hopkins, S. A., Cisco	404	481
Ingram, J. A., Shawnee	872	911
Ilseng Production Company, Fort Worth	234	324
Infield Petroleum Co., Austin	863	1,005
Idaho Oil Company, San Antonio	1,257	1,392
Independent Oil and Gas Company, Tulsa	430,461	291,546
Isaacks, B. K., Fort Worth	828	970
Irick Oil Co., Waskom	157	189
Jacob Oil & Gas Co., Graham	362	466
Julia Oil Co., Sour Lake	3,565	4,278
Jones, Hugh, Burkburnett	2,451	3,167
Junior Oil Company, Houston	1,660	2,507
James, Tom, Albany	7,560	10,331
Jackson, J. S., Tr., Sour Lake	4,653	5,583
Jackson Company, San Antonio	1,180	1,317
Judson Oil Company, Tulsa	7,091	9,708

*Incorrect valuation.

Had Halliburton relied solely on patent protection to maintain its business, it would have reserved to itself the hundreds of thousands of dollars spent in research, development and improvement. But Halliburton has always realized that permanent business is founded on the bedrock of service. The result of this policy is a degree of cementing efficiency and organization undreamed of when the Perkins Patent went into effect.

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Name, Address—	Barrels	Amount
Jones, J. E., Wichita Falls	1,375	1,877
Janellen Oil Company, Tulsa	115	132
Japhet Production Co., Houston	5,999	5,157
Jones, J. A., Moran	328	463
Jones, W. A., Minerva	819	906
Jones, Edwin M., El Dorado, Ark.	13,661	17,224
Justin Oil Corporation, et al, Wichita Falls	9,269	13,086
Johnson Bros., San Antonio	6,875	8,015
Kistler, Frank E. & Co., Littleton	5,687	4,905
Kate Bell Oil Company, Dallas	970	1,317
King Royalty Company, Wichita Falls	51,586	69,791
Kirby Petroleum Company, Houston	29,368	20,584
Klemcke, George, Tr., Von Ormy	1,787	1,757
Keener Oil & Gas Company of Texas, Tulsa	4,821	6,199
Killam, O. W., Laredo	76,341	62,451
Kokomo Pet. Co., Gorman	453	602
Kahle, Gracey & Diver, Bridgeport, Ill.	4,757	2,854
King & Daniel, Wichita Falls	6,262	8,814
Kolp, C. F., Electra	23,624	30,011
Kemrow Company, Wooster, Ohio	13,126	18,141
Kuhlemeier-Kleiner Oil Co., Cisco	708	939
King, Anna B., Muskogee	380	247
Kershaw, L. R., Muskogee	1,141	741
Keck Investment Company, Los Angeles	7,676	4,989
Kewanee Oil & Gas Co., Titusville,	150,800	200,397
Koenig, Max W., San Antonio	21,551	17,672
Kaufman, L., San Antonio	607	594
Keystone Production Company of Texas, Fort Worth	3,463	4,766
Kent, G. C., Corsicana	20,663	26,713
Kavanaugh Petroleum Co., Houston	3,774	4,855
Keller, J. E., Iowa Park	557	801
Kurz Oil Co., Somerset	478	435
King, A. A., San Antonio	396	489
Knotts, F. F., Wichita Falls	511	713
T. P. Kerr, Corsicana	438	558
Kimmell & Woofter, Wichita Falls	1,144	1,611
Kleiner, Charles J., Cisco	16,321	21,315
Kimbell-Bostic Pipe & Supply Company, Burkburnett	3,009	4,183
Keen & Woolf Oil Co.—Newton & Lillie, Shreveport	21,008	25,209
Kleinfelder, B. F., Breckenridge	517	686
Kohlman, Richard, Wichita Falls	650	750
Kansas City, Mexico & Orient Ry. Co., Wichita Falls	14,946	.....
Lloyd Oil Corporation, Fort Worth	13,559	17,048
Linedo Oil Co., Lincoln, Neb.	1,825	1,460
Lowe, Delaney & Carter, De Leon	307	240
Laning, Mrs. R. A., Wichita Falls	6,731	9,513
Lackey, W. G., Tulsa	3,636	4,834
Liberty Oil & Gas Trust, Baltimore	219	257
Lowry Oil Corporation, Wichita Falls	5,628	7,635
Lewis Production Company, Pittsburgh	19,618	24,829
Lesh, John I. & Co., Wichita Falls	9,143	5,897
Letwin & Lippitt, Breckenridge	11,608	15,345
Leonard, Geo., Somerset	570	559
Leonard Oil Co., Somerset	225	234
Lefors Petroleum Company, Lefors	8,364	8,808
Long, C. B., Wichita Falls	73	90
Louisiana Oil Refining Corporation, Shreveport	120,565	88,454
Landreth Production Corporation, Fort Worth	14,084	20,017
Lain Oil Co., Somerset	1,276	1,353
Lucey Petroleum Company, Dallas	289	365
Lake Graham Oil Co., Houston	2,557	3,189
Lea & Daniel, Wichita Falls	4,981	6,529
Lea & Daniel (12-31-28), Wichita Falls	1,201	1,750
Landreth Production Corporation, Fort Worth	6,796	8,139
Lewis, J. E. & Co., Eastland	3,178	4,190
Lane, J. G. et al, Amarillo	28,573	20,557
Len-Cook Oil Co., Electra	579	904
Len-Cook Oil Co., Electra	553	798
Lake View Oil Co., Sour Lake	12,313	14,775
Lesh & McCall, Nocona	23,479	14,087
Lesh, Kilcrease & Co., Nocona	2,377	2,139
Lockhart & Co., Los Angeles	46,355	47,448
Lebow, C. H., Tulsa	1,130	1,583
Loewenstein Oil Company, Rockdale	1,004	1,102
Lawson Eugene B., Tulsa	60,674	77,813
Levy, Leonard M., Trustee No. 2, Fort Worth	1,455	2,124
Levy Leonard M., Trustee No. 1, Ft. Worth	2,810	4,199
Lone Star Gas Co., Dallas	7,957	11,259
Leiser-Rochmill Prod. Co., Ft. Worth	1,385	2,107
Little, Wm., Breckenridge	307	363
Lytle, C. F., Mexia	6,523	8,055
Lomax, Thornton Jr., Wichita Falls	2,597	3,613
Little Caddo Syndicate, Ft. Worth	946	1,255
Lee, Homer, Wichita Falls	1,718	2,382
Lytle Oil Association, Lytle	238	211
Loggie & Arendt Oil Co., Albany	2,066	2,500
Last Chance Gas Company, Pampa	4,094	4,566
Lewis, J. E., et al, Eastland	1,030	1,308
Lee & Simon, Cisco	188	292
Lynn Oil Co., Inc., Brenham	715	322
Lynne Oil Co., Inc., Brenham	3,042	1,369
Melat Oil Co., Ft. Worth	8,459	10,186
McGinley-Sigler Company, Ft. Worth	225	118
McGinley-Sigler Company, Ft. Worth	165	86
McLester Oil Company, Eastland	17,587	27,156
May Camp Drilling Co., Ft. Worth	1,389	1,734
McNallen & Letwin, Breckenridge	250	353

Name, Address—	Barrels	Amount
McFall, J. M., Wichita Falls	1,039	1,428
McJunkin, Florence et al, Tulsa	485	735
Mason, J. F., Putnam	3,242	4,447
Massie, J. H., Wichita Falls	15,778	21,079
Moran, W. J., Wichita Falls	2,680	3,775
Mid-Continent Holding Corp., Wichita Falls	4,664	5,676
Minor Oil Co., Beaumont	8,068	9,681
Medina Oil & Gas Co., San Antonio	209	223
Mid-Kansas Oil & Gas Co., Findley, O.	1,781,851	1,186,545
M. & V. Oil Company, Wichita Falls	4,706	6,392
Magnolia Petroleum Co., Dallas	2,726,878	2,509,717
McIlroy Oil Co., Inc., Amarillo	45,295	43,125
McDonald & Campbell, Dallas	4,294	5,985
Maer & Staniforth, Wichita Falls	1,579	1,902
Marshall Geo. S., Laredo	10,291	8,233
Mennis, G. W., Wichita Falls	4,007	5,483
McNamara Oil Co., Beaumont	2,336	2,803
McCormick & Noak, Rockdale	75	89
McChesney, Nancey, Olney	3,836	5,348
Morton, A. D., Tulsa	556	668
Moore, C. O., Oil Corp., St. Louis, Mo.	4,165	4,864
Mann, Floyd, Graham	1,889	2,497
Mann, F. A. (Grenshaw lease), Graham	278	394
Mitcham, G. P., Cisco	1,350	1,795
Minntex Oil Corp., Wichita Falls	616	906
McCrary, E. W., Tulsa	4,701	5,778
McCutcheon, C. E., Trustee, Wichita Falls	7,709	10,383
Moss & Urchel, Dallas	17,362	21,848
Moss, Urchel & Keys, Dallas	7,621	9,387
Mann & Forbes, Graham	2,014	2,862
Moore, F. L., Trustee, Tulsa	2,409	3,147
Mook-Texas Oil Co., Ft. Worth	9,375	12,194
Mayberry, C. R. & Co., San Antonio	2,928	2,343
McCall, C., Trustee, Nocona	603	543
McDaniel Oil Corp., Cisco	4,852	7,116
Minnehoma Oil & Gas Co., Tulsa	5,915	4,941
Moutray Oil Co., Abilene	97,307	130,201
Meridian Pet. Corp. of Texas, Tulsa	2,866	3,429
McGraw Oil Co., Tulsa	1,450	1,821
McMurray, J. L. et al, Cisco	2,319	3,220
Meredith & Gant, Wichita Falls	2,543	2,918
McBride, W. C., Inc., St. Louis	6,838	8,111
Merrick & Bristow, Ardmore	180,537	119,713
Merrick & Lamb, Ardmore	22,025	17,620
Mendenhall Oil Co., Cisco	1,995	2,635
Marquette Oil Co., Tulsa	4,832	5,436
Madison Oil & Gas Co., Electra	5,288	7,472
Marnet Oil & Gas Co., Tulsa	3,633	4,694
Merydan Petroleum Company, Pampa	12,655	14,597
Milham Corp. of Texas, San Antonio	12,727	17,690
Mecom Oil Co., Liberty	3,708	4,450
Montgomery, Rea-Montgomery, Sedwick	1,755	2,295
McDonald, A. C. & M. C., Putnam	4,122	5,396
Midwest Exploration Co., Amarillo	106,651	119,234
Medio Oil Co., San Antonio	948	1,186
Macknold Co., San Antonio	275	286
Midwest & Gulf Co. of Texas, Trust Estate, Tulsa	1,439	1,559
Moore, C. O., Oil Corp., St. Louis	5,154	6,811
Minerva Petroleum Co., Minerva	1,103	1,420
McCarter, R. C., Cisco	375	542
Mills & Garitty, Corsicana	1,932	2,280
Martin, Drake & Jones, Houston	7,939	9,527
Matador Oil Corp., Amarillo	43,098	20,027
Moore, N. A., Eastland	2,656	3,460
Mues & McDermott, Ft. Worth	379	465
Menke, John G., Wichita Falls	1,355	1,796
McKanna, James E., Agt., Wichita Falls	45,352	59,232
McNallen & Griffin, Tulsa	4,418	5,744
Magee Brothers, Electra	855	1,254
McCarty Oil Co., Wichita Falls	78,205	111,565
McMan Oil & Gas Co., Tulsa	550,013	452,060
Maxwell, J. C., Ft. Worth	88,036	58,832
Mid-Continent Petroleum Corp., Tulsa	11,986	15,583
Madden & Hunt, Olney	37,955	54,295
Marland Production Co., Ponca City	1,352,906	1,156,737
Martin & Hamilton, Wichita Falls	35,078	43,778
Miller & Miller, Putnam	272	409
Miller & Miller, Putnam	216	279
Marts, E. R., Dallas	12,859	21,254
Murchison Oil Co., Dallas	274,287	157,855
Millican Oil Co., Burkburnett	7,858	14,696
McLester Oil Co., Breckenridge	3,755	5,278
McLester Oil Co., Breckenridge	2,422	3,069
Moody Corp., Tulsa	824,743	680,410
Meredith, J. D., Moran	4,220	4,630
Noble Oil & Gas Co., Tulsa	5,398	7,590
Noak & Lanning-Phillips & Perry, Rockdale	154	182
Nabob Oil & Gas Co., Amarillo	10,259	11,688
Noak & Lanning, Shelton, Rockdale	314	396
Noak Oil Co., Rockdale	1,171	2,234
North Fork Oil Co., Amarillo	4,083	4,851
Nutt & Gates, Wichita Falls	1,504	2,128
Noble Oil & Gas Co., Tulsa	4,618	5,849
Number Nine Oil Co., Tulsa	2,330	3,191
Nimrod Oil Co., Dallas	250	405
New Domain Oil & Gas Co., Pittsburg	1,497	1,410
Navarro Oil Co., Houston	194,422	227,399
National Oil Co., San Antonio	763	728
Newton-Palmer Oil Co., Rockdale	507	636

XUM

SKILLED SUPERVISION GUARANTEES THE QUALITY OF GULF PRODUCTS

COASTAL AND PARAFFINE CRUDES
GASOLINE — LUBRICATING OILS
NAPHTHA — GAS — OILS
WAX — PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

GULF REFINING COMPANY

General Sales Offices

PITTSBURGH, PA.

District Sales Offices

New York Boston Philadelphia Louisville Atlanta Houston New Orleans

Ocean Terminals

Boston (Beverly), Mass.
Providence, R. I.
New York Harbor (Bayonne, N. J.)
Jacksonville, Fla.
Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

Say you saw it in The OIL WEEKLY

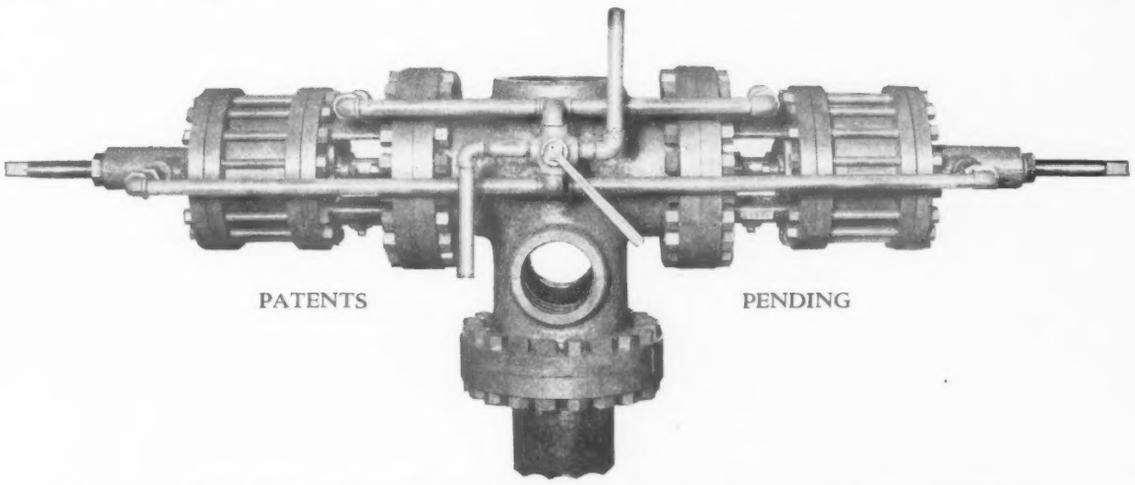
XUM

Name, Address—	Barrels	Amount
Newport & Ohio Petroleum Co., Newport, N. Y...	484	618
Norman Oil Co., Wichita Falls	755	1,119
Necessity Oil Corp., Eastland	1,087	1,350
Nash & Windfohr, Graham	9,759	13,907
Nash & Windfohr Oil Corp., Graham	71,130	106,209
Oklahoma Petroleum & Gasoline Co., Tulsa	103,528	184,533
Olney Oil & Refining Co., Olney	573	770
Okla. Pet. & Gasoline Co. of Texas et al, Tulsa....	14,327	18,172
Oil Investment Co., Wichita Falls	2,750	3,568
Omohundro, W. B., Wichita Falls	16,402	22,578
Orange Petroleum Corp., Orange	30,815	36,032
Overby, J. D., Iowa Park	443	623
Operators Oil Co., Tulsa	22,026	25,440
Operators Oil Co., Tulsa	9,570	11,374
Ocean Oil & Refining Co., El Paso	1,064	1,086
Osborne, R. R., et al, Amarillo	1,748	2,343
Oriental Oil Co., Dallas	415	510
Old Colony Oil Co., Dayton	1,464	1,757
Owenwood Pool No. 3, J. W. Robbins, Trustee, Ft. Worth	3,630	4,301
Omyx Oil Co., Houston	33,467	28,868
Optimist Oil Co., Electra	3,163	4,167
Oktaha Company (The) Tulsa	697	878
Olean Petroleum Co., Bristow	20,993	14,548
Osage Development Company, Bartlesville	1,274	1,019
Oil Operators Trust, Ft. Worth	3,797	4,569
Ohio Somerset Oil Co., (The), Cleveland, O	1,453	1,525
Operators Oil Co., Tulsa	65,449	72,055
Old Ocean Oil Co., Kansas City	4,032	3,389
Owen-Sloan Oil Co., Big Spring	140,729	92,043
Ohio-Texas Oil Co., Inc., Albany	115,115	115,565
Oldom, Wm. P., Iowa Park	1,149	1,694
Ocean Oil & Refining Co., El Paso	977	919
Osborne, R. R. et al, Pampa	978	1,236
Omilak Oil Co., Spokane, Wash.	159	171
O'Neal, John, Wichita Falls	11,017	15,487
Petroleum Producers Company, Wichita Falls	102,390	126,773
Phillips Petroleum Company, Bartlesville	1,408,472	1,552,185
Prairie Oil & Gas Company, Independence, Kans...	1,454,272	1,262,236
Palmer & Burch, Inc., Wichita Falls	19,181	26,577
Perkins and Cullum, Wichita Falls	28,483	39,226
Panhandle Refining Company, Wichita Falls	111,087	151,529
Petroleum Producers for Account of C. E. McCutchen, Wichita Falls	990	1,382
Pandem Oil Corporation, Wichita Falls	21,174	28,007
Pilkinton, F. L., Burkburnett	1,852	2,267
Payne, F. G., et al, Wichita Falls	3,658	5,169
Pace, Geo. L., Wichita Falls	710	943
Pois and Johnson, Wichita Falls	567	785
Pois, Fine and Schulz, Wichita Falls	1,060	1,483
Pace & Ward, Breckenridge	2,126	2,870
Producers & Refiners Corp. of Texas, Independence	5,474	7,294
Perkins, J. J., Wichita Falls	2,719	3,639
Pennok Oil Corporation, Tulsa	18,560	21,317
Price-Russell & Co., Ranger	3,388	5,195
Paull Oil Company, Graham	17,192	24,295
Producers Supply & Tool Company, Marietta, Ohio	444	5,811
Pemeta Oil Company, Fort Worth	7,012	9,397
Peery's Thos. H., portion of C. W. Boller et al, Wichita Falls	1,175	1,676
Parry Oil Company of Texas, Inc., Fort Worth....	472	586
Piper, L. E., Tr., Vernon	2,053	2,693
Pickrell, Frank T. & Cranfill Bros. Oil Co., Fort Worth	818	532
Pollard, W. E. & C. E., Pampa	6,342	7,948
Producers Credit Company, Llano	603	758
Powell, H. J., San Antonio	7,534	6,796
Portland Drilling Corporation, Wichita Falls	834	1,103
Powell, J. L., Wichita Falls	471	619
Piney Oil & Gas Company, New York	4,052	3,550
Pure Oil Company, Chicago	2,220,558	1,728,646
Pois, M., Tr., Wichita Falls	296	400
Paraffine Oil Company, Houston	13,602	16,322
Pois, M. et al, Wichita Falls	4,793	6,607
Py-Tex Oil Company, Winchester, Ky	1,121	1,721
Pickens & Lewis, Dallas	549	692
Putnam Oil Company, Tulsa	43,404	57,044
Progressive Production Company, Kansas City	1,625	2,225
Pickrell, Frank T. & Cranfill Bros. Oil Company, Fort Worth	8,015	5,210
Pratt, Thos. H., Brenham	303	283
Phair, F. L. & L. W. Wright, Houston	112	78
Powers Production Company, Houston	1,879	1,733
Prairie Oil & Gas Co.-Prairie-Shamrock Operating Account, Independence	66,290	76,256
Primrose Oil Co., Sour Lake	1,203	1,444
Paggi Bros. Oil Co., Beaumont	10,763	12,916
Paggi, Chas. & Co., Beaumont	684	821
Producers Drilling Company, Wichita Falls	5,537	7,302
Poor Boy Oil Co., Rockdale	535	656
Petroleum Investment Company, Wichita Falls....	3,424	4,678
Phillips, J. R. (Currie), Amarillo	1,645	1,663
Phillips, J. R. (Invader Drilling Co.), Amarillo....	7,536	6,462
Phillips, J. R. (Blasdel), Amarillo	296	213
Phillips, J. R. (Heywood), Amarillo	6,951	7,368
Plymouth Oil Company, Pittsburgh	44,151	28,698
Philp Bros., Beaumont	1,893	2,272
Pharis Oil Co., Amarillo	2,778	2,778
Pivoto, M. E., Sour Lake	3,370	4,056
Phillips, W. G. & J. B. Milam, Chelsea, Okla....	66	83
P-M Drilling Co., W. E. Ross & W. L. Samuels & A. J. Fraley, Chelsea	143	143
Palo Duro Oil Company, Amarillo	8,676	7,978
Paramount Oil Royalties, Inc., Brownwood	833	886
Prairie Lea Production Co., San Antonio	12,900	10,676
Poole, B. O., Batson	2,383	2,859
Pioneer Oil, Gas & Refining Co., Danville, Ill.	1,261	1,310
Pantex Oil Company, Boston	10,827	11,742
Pitzer & West, Breckenridge	23,053	31,122
Putnam Supply Co., Brownwood	1,212	1,648
Quincy Oil Co., Vernon	154	202
Quinn, J. W., et al, Eastland	10,186	15,484
Quartet Oil Company, Tulsa	7,223	10,407
Ramsey, E. H., Rising Star	419	632
Robert Oil Corporation, Breckenridge	65,647	91,996
Ruthada Oil Co., Oklahoma iCty	15,388	14,679
Roberts, H. W., Wichita Falls	2,659	3,784
Red River Oil Company, Tulsa	17,431	24,021
Rhodes & Highers, Breckenridge	7,877	10,398
Robinson, O. D., Pittsburgh	1,474	1,567
Ray & Massie, Wichita Falls	14,384	16,886
Rathke Oil Company, Wichita Falls	24,498	33,254
Rock Island Oil Company, Amarillo	354	333
Reno Oil Company, Sistersville, W. Va.	55,143	76,373
Rockdale Junior Oil Co., Rockdale	222	275
Ryan Consolidated Petroleum Corp., Tulsa	94,051	126,672
Rockwell, J. A. & Co., Warren, Pa.	237,568	3,099
Rock Island Oil Company, Amarillo	1,161	1,103
Rycade Oil Corporation, Houston	205,943	204,002
Root, C. M., et al, Eastland	23,332	31,617
Republic Production Company, Houston	937,707	799,300
Ramsel, W. T. Oil Company, Rockdale	1,916	2,414
Ross Segunda Oil Co., Laredo	588	470
Ross, James F., Laredo	4,304	3,440
Ross Amigos Oil Co., Laredo	11,105	8,884
Ruyle Farm & Oil Co., Wichita Falls	6,962	9,714
Roeser & Pendleton, Inc., Fort Worth	386,348	532,099
Rolyat Production Company, Houston	10,668	12,325
Roy Long Oil Company, Navasota	2,556	3,299
Reed, Crenshaw & Glass, Nowata, Okla.	12,915	17,627
Robinson, Arthur D., Dallas	7,550	8,389
Red Bank Oil Company, Tulsa	16,508	22,454
Ramming & Saunders, Wichita Falls	5,003	7,256
Ramming, Staley & Ramming, Wichita Falls	736	992
Ramming, R. W., Wichita Falls	5	6
Rochmill, Henry, Tr., Fort Worth	422	481
Rex-Tex Oil Company, Winchester	1,121	1,721
Reserve Petroleum Company, Tulsa	884	1,321
Rio Bravo Oil Company, Houston	422,823	490,469
Riner & Bailey, Wichita Falls	23,635	31,639
Richardson & Kelsey, Fort Worth	25,503	16,577
Robinson, J. B., Sour Lake	210	252
Reeder & Scarborough, Wichita Falls	1,220	1,671
Rountree, White & Simpson, Rockdale	871	1,133
Ruby Oil Company, Minerva	237	304
Reiter-Foster Oil Corporation, Tulsa	24,009	31,553
Rubsam & Hunter, Wichita Falls	2,086	2,774
Richardson & Kelsey, Fort Worth	67,499	43,874
Ramsey & Decker, Breckenridge	5,843	8,396
Rex Petroleum Corp., Vinton, La.	19,962	23,955
Russell & Wilson, Wichita Falls	3,818	4,714
Root & Rhodes, Eastland	4,386	5,812
Root, C. M. (Root Drilling Company) Eastland...	15,368	20,402
Root, C. M., Eastland	9,414	12,933
Ross & Slicker Oil Co., Cisco	849	1,158
Robertson, R. R., Wichita Falls	14,772	18,551
Reeder, R. S., et al, Wichita Falls	7,479	10,317
Ranell Oil Company, Oklahoma City	5,331	7,145
Reclamation Company, Fort Worth	6,624	8,555
Riggs & Oliphant, Graham	17,327	22,820
Reinhart, M. J., Tr., Oklahoma City	553	759
Rowe, J. G., Wichita Falls	474	619
Redmond, W. J., Brownwood	526	721
Redmond, W. J. Brownwood	528	639
Dwight M. Ross, Wichita Falls	10,141	14,177
Rentex Oil Co., San Antonio	7,060	7,958
Ross, C. E., Burkburnett	578	763
Schermerhorn Oil Company, Minneapolis	240,842	159,266
Stidham & Thrasher, Electra	436	283
Somerset Oil Co., Easthampton, Mass.	72	69
Stock, H. I., Cisco	2,511	3,168
Sheldon, C. P., Electra	7,467	9,822
Shallow Sand Oil Company, Fort Worth	1,080	1,423
States Oil Corporation, Eastland	39,841	56,705
Superior Oil Producing Company, Tulsa	2,651	3,030
Smith, Mrs. Hattie E., Burkburnett	3,159	4,303
Smith, Mrs. Hattie E., Burkburnett	328	411
Scott & Walker, Albany	2,440	2,757
Sheffield, Frank H., Houston	2,156	2,598
Sheffield, Frank H., Houston	1,975	2,370
Skelly Oil Company, Tulsa	1,265,559	953,201
St. Marys Oil & Gas Company, St. Marys, W. Va.	34,901	37,747
Sun Oil Company, Dallas	1,338,139	1,347,347
Smith, R. E., et al, Houston	24,685	30,695
Skia-Tex Petroleum Co., Amarillo	29,202	29,714
Stella Oil Company, Beaumont	12,730	15,276

XUM

CAMERON IRON WORKS

Steam-Operated Blowout Preventer



PATENTS PENDING

A SURE CURE

---for Blowouts

Blowouts are the scourge of the oil production industry,—no well is immune, and no symptoms present themselves in advance to the disaster. Blowouts happen when and where they will, with no regard for equipment, lives or other havoc they cause.

Cameron Iron Works new Steam Operated Blowout Preventer is a sure cure for impending and disastrous blowouts. This new preventer is faster, tougher, and safer.

It closes instantaneously and securely by the rams forming a vise-tight circle of steel around the drill stem. A 4-way valve controls the preventer, and this valve is located at a safe and convenient point from the well, giving you "remote control," a distinctive feature of this tool.

The rams in the preventer are packed with a patented hydraulic packing that is so designed that the heavier the pressure the tighter the pack becomes. The new STEAM OPERATED Blowout Preventer is simple in design and operation and easily installed.

WRITE FOR NEW BOOKLET GIVING COMPLETE DETAILS OF OPERATION AND HOOK UP

It is absolute and positive in closing and will hold the heaviest pressures ever encountered in well drilling. C-I-W Preventers have saved many wells from disaster and it can SAVE YOURS.

CAMERON IRON WORKS

MFGRS. OF OIL WELL SUPPLIES & FISHING TOOLS

HOUSTON, TEXAS

XUM

Name, Address—	Barrels	Amount
Smith & Bynum, Amarillo	3,204	3,241
Smith, Mrs. James L., Amarillo	9,232	10,304
S. & W. Oil Company, Amarillo	18,212	15,965
Stock, Anna B., Cisco	211	266
Southern Crude Oil Purchasing Co., Fort Worth	3,984,993	2,590,245
Snowden & McSweeney Company, New York	120,038	167,553
Shaw Oil Company, Wichita Falls	59,133	79,105
Seaboard Oil & Gas Company of Texas, Wichita Falls	25,571	35,032
Staley, J. I. & Company, Wichita Falls	3,651	4,766
Staley, Wynne & Company, Wichita Falls	157,298	200,608
Shackelford, F. L., Wichita Falls	812	154
Schlaffke, Edward, Electra	325	410
Superior Oil Prod. Co., & Geo. E. Lamb, Brownwood	221	272
Spring Creek Oil Co., Amarillo	4,914	5,064
Shell Petroleum Corporation, St. Louis	3,555,869	2,529,844
Stekoll, Harry, Tulsa	3,191	2,685
South Texas Petroleum Company, Houston	207,883	286,020
Sink, Joel, Corsicana	165	208
Smith-McIntosh & Thomas, Cameron	663	707
Stroube & Stroube, Corsicana	32,542	41,585
Simms Oil Company, Dallas	827,280	659,543
Schimmel Production Company, Fort Worth	29,353	34,540
Slicker, Homer, Cisco	773	948
Selby O. & G. Company, Tulsa	6,570	9,608
Sand Creek Oil Company, Amarillo	5,263	4,876
Sinclair Oil and Gas Company, Tulsa	134,233	188,050
Shaw, T. G., Fort Worth	94,904	106,075
Snider, C. W., Wichita Falls	1,336	1,931
Sedwick Oil Company, Tulsa	13,952	17,287
Slick, T. B., et al, Oklahoma City	4,700	6,979
Schaffner-Wilson et al, Markley	1,916	2,827
Scarborough, W. A., Burkburnett	2,737	3,669
Sprague Oil Company, Ardmore	54,230	35,249
Summit Oil & Refining Corporation, Amarillo	6,250	6,301
St. Louis Oil & Dev. Co., Wichita Falls	464	579
Southern Petroleum Exploration, Inc., Sistersville	20,601	24,107
Sinclair Oil and Gas Company, Houston	154,212	187,706
Skinner, E. W., Oil Co., Saratoga	3,996	4,451
Speed, C. D., Corsicana	303	409
Smith, McIntosh & Thomas, Branch Coulter Lease, Cameron	1,270	1,692
Steele, Charles F., Rosston, Ark.	301	612
Shemen Oil & Gas Co., Pittsburgh	76	107
Shemen Oil & Gas Co., Pittsburgh	77	112
Syndicate Oil Corporation, Rochester, N. Y.	2,517	3,614
Salado Oil Company, San Antonio	1,676	1,705
Somerset Crude Oil & Ref. Co., Somerset	2,865	3,084
Smith, E. L. Oil Company, Inc., Mexia	191,463	214,896
Schaffner, E. N., et al, Cross Plains	1,144	1,418
Shappell Oil Company, Wichita Falls	47,235	64,388
Scarborough-Reeder & Cook, Wichita Falls	815	1,101
S. & O. Oil Company, Houston	809	648
Standard Oil Land & Leasing Co., Electra	324	446
Simmons, T. K., Tulsa	2,879	3,595
Summerfield Oil Co., Tulsa	237	319
Stratton Ed F., Pioneer	326	377
Staley, J. A., Wichita Falls	2,229	3,096
Swanner, John L., Wichita Falls	2,188	2,927
Sessions I. P., Rockdale	352	441
Southern Exploration Company, Houston	1,461	1,846
Seybert Bros., Mooringsport, La.	6,900	10,146
Saxet Oil Company, Houston	43,151	42,578
Silk, Bullington & Clark, Wichita Falls	6,857	5,145
Silk, Bullington & Clark, Wichita Falls	6,310	4,730
Silk, Bullington & Clark, Wichita Falls	7,403	5,552
Silk, Bullington & Clark, Wichita Falls	6,806	5,339
Silk, Bullington & Clark, Wichita Falls	4,774	3,959
Somerset Oil Co., San Antonio	1,233	1,310
Somerset Oil Co., San Antonio	1,232	1,338
South Texas Petroleum Co., Houston	119,785	161,571
Schlicher Oil Company, Beaumont	358	477
Strelsky, Joe & Hefley, Rockdale	480	624
Schoolfield, R. E., Wichita Falls	256	315
Shattuck, R. H., Dallas	3,196	3,969
Shoup, O. H., Jr., Colorado Springs	3,093	4,337
Sircovich, A. & Mrs. F. M. Thomas, Houston	552	438
Stephens & Fisher, Wichita Falls	1,173	1,425
Sandefer-Atkinson-Daniel Oil Corp., Breckenridge	4,239	5,777
Swensondale Petroleum Corporation, Wichita Falls	9,475	12,336
Shasta Oil Co., Wichita Falls	613	777
Sizler Oil Co., San Antonio	987	1,158
Scott & Britton, Graham	115	142
Scott & Nance, Graham	2,029	2,797
Steed, Paul P., Wichita Falls	2,254	2,925
Steed, Paul P. & A. R. Gaus, Wichita Falls	2,718	3,570
Steed, Paul P., Wichita Falls	239	277
Smith, W. B., et al, Eastland	505	679
Scarborough & Smith, Burkburnett	551	631
Saratoga Oil Co., Wichita Falls	844	1,120
Star Drilling Co., Wichita Falls	3,637	5,034
Smith, M. L. V., Vernon	935	1,153
Supreme Oil Company, Orange	5,389	6,466
Snow Oil Co., Riggs & Oliphant, Graham	1,393	1,809
Stovall, E. C., Graham	10,659	15,533
Stump, E. J. & Co., Venmex Oil Co., Wichita Falls	7,958	11,337
San Balt Petroleum Company, Kansas City	.....	.....
Shackelford Oil Co., Ranger	7,868	10,761
Spencer, H. H. & Co., Burkburnett	2,198	4,182
Shertzer, C. P., Dewey	6,994	9,352
St. Albans, Ruth, Laredo	695	556
Sneed Royalty Co., Tulsa	2,974	2,464
Thomas, J. A., Burkburnett	2,408	3,239
Thurber, C. J., Iowa Park	1,616	2,124
Thurber, C. J., Iowa Park	253	312
Texon Oil & Land Co. of Texas, Big Lake	173,395	105,169
Taylor-Link Oil Co., Houston	25,739	16,730
Texas Consolidated Oil Co., San Francisco	14,166	19,507
Texas Company, Houston	3,606,194	4,082,546
Texas Pacific Coal and Oil Company, Thurber	306,989	319,200
Travelers Oil Company, Amarillo	12,496	12,645
Tillman, J. W., Humble	574	609
Tucker, W. B., Dallas	1,213	1,450
Thompson, J. E., Humble	642	771
Transcontinental Oil Company, Tulsa	4,996	6,308
Transcontinental Oil Company, Tulsa	22,203	27,116
Transcontinental Oil Company, Tulsa	1,735,374	1,127,993
Terry, H. M., Sour Lake	10,061	11,695
Tholl Oil Co., Beaumont	4,096	5,949
Turman, L. C., Fort Worth	85,628	55,658
Turman & Brown, Fort Worth	6,424	6,138
Timms, L. W. Oil Corp., Amarillo	9,455	11,489
Timms-Dietsch Oil Corp., Amarillo	6,899	8,396
Tidal Osage Oil Company, Tulsa	7,722	8,433
Tidal Oil Company, Tulsa	230,616	181,145
Tucker Oil Company, Wichita Falls	81,879	105,831
Theis Oil Company, Sour Lake	3,861	4,633
Triangle Petroleum Co., Fort Worth	1,009	1,348
Tannehill, L. B., Albany	73,708	99,255
Turman Oil Company, Tulsa	17,295	23,100
Tripplehorn, D. R., Pampa	8,304	10,670
Talley and Irick, Shreveport	193	232
Tate-Weekley & Tubb, Fort Worth	6,184	4,947
Trinity Production Co., Wichita Falls	448	600
Tegler, F. E., San Antonio	426	463
Texas Unity Oil Company, Dallas	2,564	3,534
Trimount Petroleum Company, Shreveport	6,035	9,002
Texas Petroleum Development Co., Cameron	6,019	7,652
Texota Petroleum Co., Electra	310	466
Trans-Bay Oil Company, Galveston	90	108
Tower & McKanna, Inc., Wichita Falls	9,931	14,532
Thaxton, W. H., Estate, Austin	394	529
Towns, M. K., Luling	46,231	40,355
Teatsorth, L., et al, Eastland	2,066	3,146
Texmont Oil & Investment Co., Amarillo	4,545	5,418
Texmont Oil & Investemnt Co., Amarillo	34,931	33,972
Tyson Oil Company, Sour Lake	484	581
Triangle Oil & Gas Co., Rockdale	1,378	1,731
Thomas, J. A., Burkburnett	20,492	35,556
Texas Oil Corporation, Dallas	132	173
Taylor-Link Oil Company, Houston	20,019	13,012
Tidwell, H. L., Tr., Graham	1,521	1,950
Tidwell, R. V., Tr., Graham	4,950	6,575
Texas Fidelity Oil Corporation, Fort Worth	8,112	12,416
Tripplehorn, J. W. & D. R., Fort Worth	2,483	3,013
Thomasson, E. M. & Co., Inc., Denver	694	1,061
Texas Pacific Coal and Oil Co., Other Companies For, Thurber	67,511	89,875
Townsite Oil Co., Olney	170	157
Teatsorth, L., et al, Eastland	521	677
Teci Production Company, Breckenridge	2,230	2,999
Trinity Townsite Company, Dallas	705	945
Texas Oil Underwriters, Brownwood	676	944
Taylor-Sibley Syndicate, Dallas	2,389	3,291
Townsite Oil Co., Olney	3,746	8,003
Texas Electric Co., Newark, O.	283	393
Union Production Company, Rockdale	4,440	5,516
Upland Oil Co., Pampa	2,590	3,000
United Royalties Corporation, Wichita Falls	719	1,130
United Oil & Fuel Co., Sour Lake	1,212	1,455
United Producers Company, Wichita Falls	46,535	65,449
Unity Oil Company, Beaumont	18,057	21,590
Union Oil & Mining Company, Tulsa	9,320	11,184
United Oil Corporation, Wichita Falls	1,497	2,063
United Petroleum Co, Brownwood	153	201
Upland Oil Company, Amarillo	3,130	4,149
Ungren-Frazier-Gibson-Johnson, Putnam	262	395
Ungren-Frazier-Wilard, Putnam	662	917
Ungren & Frazier, Putnam	299	381
Underwood Drilling Co., Wichita Falls	1,161	1,506
Underwood Drilling Co., Wichita Falls	1,140	1,428
Underwood Drilling Company, Wichita Falls	3,666	4,882
Underwood Drilling Co., Wichita Falls	1,822	2,441
Unice & Carpenter, Houston	5,490	5,490
Van Cleave Trust, Baltimore	590	887
Van Wormer, F. E., Wichita Falls	1,362	2,120
Valerio, Inc., San Antonio	568	581
Virginia Oil Assn., Fort Worth	2,912	3,931
Vacuum Oil Co., Houston	24,496	35,369
Venmex Oil Company of Texas, Wichita Falls	79,737	117,719
Val Verde Oil Company, Del Rio	1,765	1,942
Vergate Oil Company, Tulsa	1,111	1,656
Venmex Oil Company of Texas, Wichita Falls	19,712	33,032
Wallace, Dr. Charles Wm. & Hulda B., Wichita Falls	21,342	29,934
White, James H., Wichita Falls	11,405	16,058
Western Sales Corporation, Wichita Falls	3,721	4,155

XUM

U. S. Patents
No. 1,416,988, May 23, 1922
No. 1,510,804, Oct. 7, 1924

This rubber casing guard saves over 25% in power

Goodrich Grip-Tite Casing Guard eliminates friction between drill pipe and casing

GOODRICH Grip-Tite Casing Guards are piling up new efficiency records in the oil fields, and there's good reason for it.

The experience of Goodrich in adapting rubber to the needs of the oil industry has now led to the development of Goodrich Grip-Tite Casing Guards.

Grip-Tite Casing Guards eliminate friction completely, and are self-lubricated by the surrounding mud and water. They increase the speed of deep well drilling, at the same time saving from 25 to 33 per cent in power.

Grip-Tite Casing Guards form a complete bearing of resilient, abrasion-resisting rubber around the drill pipe. There are no metal-to-metal contacts. They are an exclusive Goodrich product.

Highflex belts outperform old type belts on hard drives

Fig. 1 Fig. 2

Bend a pad of paper or booklet with the fingers. When viewed from the edge (fig. 1) it assumes a natural uniform curve because of the unhampered action of the plies. Now, if several layers of paper are folded and then bent (fig. 2) you instantly see how the fold distorts the curve and impedes the free movement of the individual layers.

Grip-Tite Casing Guards can be applied, without special tools, by the driller himself, and when once applied will not shift their position on the drill pipe.

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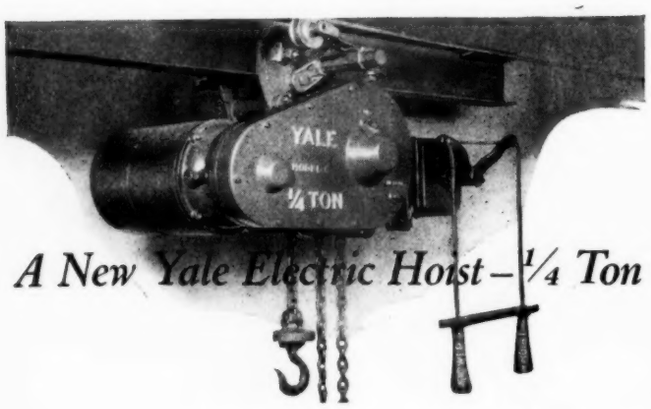

A New Yale Electric Hoist – ¼ Ton

Low Cost ⁄ High Efficiency
Safe ⁄ Rapid

This new Yale ¼ ton Electric Hoist provides rapid and safe handling for the lifting of light loads.

Industry knows the value in performing operations mechanically rather than manually. Yale offers industry a new unit for most efficient handling of light loads.

Steel Suspension. Supension is structural steel plate arranged for either hook or trolley type of hoist.

Adjustable Trolley. The Trolley is adjustable to fit I-beams from 4" to 9".

Steel Wheels. The trolley wheels are made of pressed steel and are mounted on ball bearings. Zerke fittings are provided for grease lubrication.

Motor. The fully enclosed motor is fitted with ball bearings. A. C. and D. C. motors are built to the same dimensions and therefore are interchangeable on the hoist frame.

Motor Brake. The motor is equipped with a magnetic brake which stops the machine quickly and prevents coasting when the current is shut off.

Controller. This Hoist can be furnished in either the Manual or Push Button type. Controllers are ruggedly constructed and all parts are accessible.

Reduction Gears. A planetary gear reduction is used. This operates in oil in a fully enclosed housing.

Enclosed Chain Drive and Lowering Brake. The chain drive from the motor to the sprocket and all the lowering brake parts are fully enclosed in a housing and operate in oil.

Load Sheave. This is a bronze bushed, electric steel casting, turned and ground to perfect concentricity for the large chrome vanadium steel bearing races.

Driving Pinion. The driving pinion that passes through the load sheave is machined from a single drop forging, then heat treated with the bearing surfaces on the shaft, ground to 1/1000 of an inch.

Automatic Stop. The automatic stop is mechanically connected with the controller and automatically shuts off the power when the upper or lower limit of hook travel is reached. The brakes are immediately applied and hoist brought to a stop.

Low Headroom. The hoist has been designed to operate where space is limited and close headroom is required.

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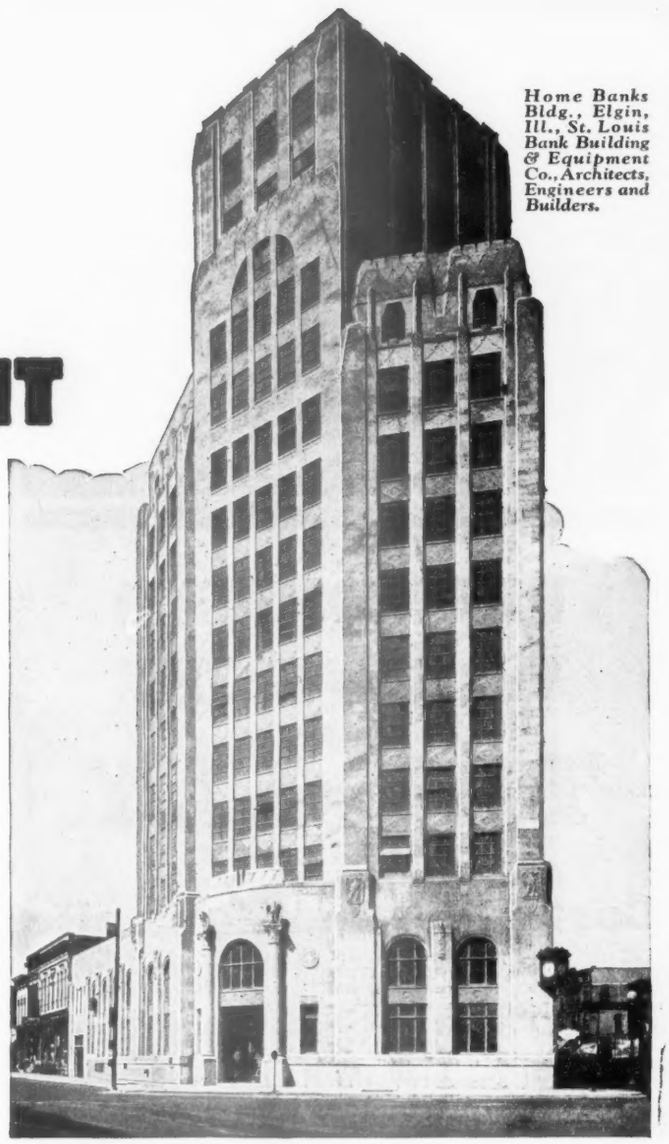
Name, Address—	Barrels	Amount
Wampem Oil Corporation of Texas, Dallas	257	317
Watson Drilling Co., Wichita Falls	3,826	5,497
Wilson Drilling Co., Wichita Falls	3,185	4,416
Wilson Drilling Co., Wichita Falls	3,039	4,356
Woodburn Oil Corporation, Dallas	4,760	6,340
Wichita Production Co., Wichita Falls	12,208	15,597
Wilson Lee, et al, Wichita Falls	5,257	7,221
Whitehill Oil Corporation, Tulsa	4,201	5,705
Wise and Jackson, Sapulpa	5,168	6,431
Wolfe, A. T. & Son, Wichita Falls	2,976	3,691
Wo-Mac Oil Company, Wichita Falls	1,530	2,107
Woody's W. C. 1/6 int. C. W. Boller, et al, Wichita Falls	1,175	1,676
West, J. H., Cisco	6,549	8,670
Weaver and Pois, Wichita Falls	2,649	3,496
Wolf, D. L., Olney	467	590
Woods, C. D. & C. C., Ranger	824	1,018
Westheimer & Daube, Ardmore	1,517	1,879
Walker, B. S., Breckenridge	1,047	1,288
Waggoner Refining Co., Inc., Electra	485,127	629,046
Wilbarger Oil Co., Wichita Falls	1,109	1,303
West Texas Land Company, Fort Worth	175	218
Webb Oil Co., Humble	3,886	4,663
West, Mrs. Bessie M., Houston	2,450	2,940
Wills Oil Company, Rockdale	1,536	1,940
Woods & Bennett, Humble	5,637	6,764
West Production Co., Houston	11,304	13,747
Woodward & Lee, Houston	8,267	8,906
Wakefield, M. E. et al, Cross Plains	216	292
Witcher, W. C., et al, Wichita Falls	370	507
Witcher, Annie L., Guardian, Wichita Falls	4,900	7,216
Wilcox, H. F., Oil & Gas Co. of Texas, Tulsa	66,738	86,700
Weiler, H. J., Wichita Falls	237	299
Wilson Drilling Co., Wichita Falls	371	520
Warner-Quinlan Co. of Texas, Dallas	250,128	162,583
Ward Oil Corporation, Ardmore	50,707	34,314
Weiler, J. G., et al, Cross Plains	1,295	1,834
Webb, J. R. & J. H. Bryant, Corsicana	397	357
Webb, J. R., Corsicana	249	298
White & Duncan, Wichita Falls	6,192	8,288
Westervelt-Noble, et al, Oklahoma City	2,996	3,935
Wentz, L. H., Ponca City	50,355	44,350
Wheelock & Collins, Corsicana	15,925	21,417
Withersoon Oil Company, San Antonio	31,884	29,045
Witherspoon Refining Company, San Antonio	10,203	11,289
Wood, Benton, Lesh & McCall, Nocona	6,079	5,471
White Eagle Oil & Refining Company, Kansas City	63,534	62,328
West Production Company, Houston	7,489	8,266
Wetzel, Sophie, Oconomowoc, Wis	4,199	3,767
Washoma Petroleum Company, Enid	3,203	4,132
Weister, E. P., Tulsa	3,710	4,756
Woodley Petroleum Company, Shreveport	15,926	23,619
Weldon Oil Co., Saratoga	13,004	13,052
Watts Oil Company, Houston	5,385	5,853
Wahpoo Oil Company, Rockdale	1,201	1,476
Williams, Burt, Wichita Falls	784	997
Wilson-Broach Co., Beaumont	15,855	19,026
Why Not Oil Company, Mexia	13,314	16,922
Williams & Williams, Amarillo	994	796
Walker, A. C., Albany	3,885	4,872
World Oil Company, Fort Worth	2,250	2,160
Warren-Hayes Oil Corp., et al, Cisco	8,450	10,406
White, Ralph W., Thrift	1,090	1,516
Wear, G. F., et al, Brownwood	124	119
Walton, T. J., Corsicana	58	66
Walton, T. J., Corsicana	183	231
Walker, Hall, Ranger	630	756
Walker, Hall, Ranger	14,400	21,366
Wills, O. C., Burkburnett	429	541
Yount-Lee Oil Company, Beaumont	3,076,092	3,535,363
York Petroleum Company, Stamford	324	412
Young Brothers & Alexander, Inc., Fort Worth	7,578	10,577
Young Brothers & Alexander, Inc., and Woodley Petroleum Co., Fort Worth	15,926	23,619
Zadie Belle Oil Co., Fort Worth	631	932
Ada Belle Oil Co., Batson	21,461	25,152
Cranfill & Reynolds, Cisco	394,572	364,905
Green, Jas. H. & Co., Inc., Brownwood	880	1,282
Greene Production Co. (1-1926 to 12-31-28), Fort Worth	11,111	9,011
Grayburg Oil Co., San Antonio	207,758	160,763
Goodwin, P. B., Breckenridge	2,274	2,936
Goodwin, P. B., Breckenridge	1,303	3,539
Goodwin, P. B., Breckenridge	5,358	7,673
Hobson and Voorhees, San Antonio	780	914
Hutton Oil Corporation, Cisco	10,523	11,581
Jonray Oil Co., San Antonio	1,169	1,173
Kirk & Evans, W. L. Holmesey, Tr., Gorman	2,664	3,454
Kay, A. W., Recv., Jones et al, Graham	1,426	1,856
Kemp, Oscar, Burkburnett	455	494
Kemp, Oscar, Burkburnett	180	226
King, R. A., Wichita Falls	3,964	3,361
King, R. A. Tr., Wichita Falls	5,561	5,561
Larkin, W. B., Wichita Falls	382	509
Manning, R. H., Fort Worth	706	791
Manning, R. H., Fort Worth	1,398	1,630
Manning, R. H., Fort Worth	1,373	1,681
Cezeaux & Martin, Humble	5,141	6,168
Cezeaux & Martin, Humble	7,333	8,801
Cezeaux & Martin, Humble	5,807	6,986
Wilkins, L. A., Burkburnett	2,219	2,973
Total	69,541,834	63,520,849

Prestolith VELO CEMENT



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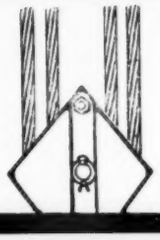

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OKLAHOMA QUARTERLY PRODUCTION REPORT FOR FIRST QUARTER, 1929

Following is a list of companies reporting to the Oklahoma Corporation Commission on Gross Production Tax from oil and gas production. The list gives those companies which reported production valued at more than $5,000 or royalty of more than $2,000.

Total Barrels Listed ..... **47,389,982** **Value, including gas** **$73,407,932**

Asterisk (*) opposite the name indicates royalty. Dagger (†) indicates value shown includes gas production.

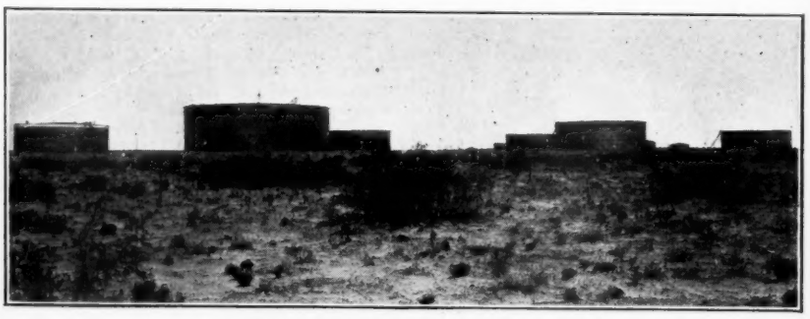
Name, Address—	Barrels	Amount
Alma Royalties Corp.,* New York	.....	$ 18,827
Arthur Oil Co., Sistersville, W. Va.	8,805	†11,673
Peter Adamson, Jr., Tulsa	.....	5,719
S. W. Anthony, Mounds	207	†13,092
S. A. Apple,* Oklahoma City	.....	15,061
Nettie H., Charles & Wilmer Anderson,* Los Angeles	.....	2,797
Arkansas Fuel Oil Co., Shreveport	6,338	6,108
Mary Sue Allison,* Brooklyn	.....	9,418
B. N. Altom,* Tonkawa	.....	8,226
American Refg. Properties, Wichita Falls	3,749	5,185
Walter Andrews,* Wesiaco, Texas	.....	6,476
Joe Abraham Estate and Fannie Abraham,* Bristow	.....	5,781
Armor Oil and Gas Co., Duncan	3,765	5,345
Adams Royalty Co.,* Chicago	63,138	97,656
American Oil Development Company, Pittsburgh	5,288	6,277
A. D. Adcock,* Okmulgee	.....	5,177
Accumulative Royalties Corp.,* Tulsa	15,442	20,858
Alma Petroleum Co., Oklahoma City	1,580	†15,712
H. N. & Ethel B. Andrews,* Newkirk	.....	6,162
Richard B. Ayers,* Flushing, N. Y.	.....	3,295
American Drilling Co., Lindsborg, Kans.	.....	†5,956
N. L. Amster, Ardmore	6,044	7,451
Atlas Royalties Corp.,* Tulsa	2,406	3,336
Argo Oil Co., Denver	24,086	†35,174
American Oil Royalties, Seminole Corp.,* Tulsa	.....	4,184
American Indian Royalties, Inc.,* St. Louis	.....	24,292
American Oil Royalties Osage Corp.,* Tulsa	.....	2,041
American Royalty Pet. Co.,* Tulsa	2,164	3,341
Amerada Petroleum Corp.,* Tulsa	877,819	†1,251,636
Atlantic Oil Prod. Co.,* Philadelphia	396,333	†549,565
F. M. Aiken, Inc., et al, Tulsa	.....	17,689
Forest Anderson,* Earlsboro	.....	5,968
T. J. Baker,* Okmulgee	.....	5,177
W. S. Billings,* Enid	.....	2,729
Bay State Oil and Gas Co., Kansas City	9,734	13,033
Beacon Oil Co., Bartlesville	5,144	5,476
Berry Petroleum Co., Tulsa	11,176	†14,985
Mrs. Mary F. Barrett,* Austin	1,827	2,247
Bridwell Oil Co., Wichita Falls	1,248	14,643
Bell Oil Gas Co., Tulsa	4,348	5,889
L. J. Burkhalter,* Blackwell	.....	2,300
F. R. Billingslea, Tulsa	.....	7,251
Earle Berryhill,* Sapulpa	.....	2,744
Frank A. Baker,* Tulsa	.....	14,465
D. D. Banta,* Tecumseh	.....	4,562
Bolene Refining Co.,* Enid	.....	30,871
W. D. Broyles,* Stillwater	.....	2,576
Bermont Oil Co.,* Bristow	4,297	†6,137
Britton-Johnson Oil Co., Tulsa	6,076	5,485
Frank Buttrum,* Oklahoma City	.....	13,860
Black, Sivalls and Bryson, Inc.,* Bartlesville	1,562	†2,088
C. D. Burns, Preston	.....	7,031
E. M. or Henrietta M. Billings,* Enid	.....	2,890
E. B. Bechtel,* Blackwell	1,598	†2,263
W. E. Brown Co.,* Tulsa	.....	13,603
I. L. Brame,* Los Angeles	.....	2,514
E. J. Beauk,* Cushing	.....	6,288
G. M. Berry,* Pawnee	.....	6,191
Thomas N. and Harriet V. Berry,* Stillwater	.....	10,455
S. J. Brown,* Duncan	.....	2,084
Mabel Gray Breene, Tulsa	4,213	5,075
Frank M. Breene, Trust Estate, Tulsa	5,741	6,576
Baker and Strawn, Tulsa	6,479	7,605
Braden and Moore, Tulsa	4,705	5,837
John H. Bennett,* Ardmore	.....	2,220
Jesse Brown,* Tulsa	.....	5,861
James E. Berry, Stillwater	.....	5,883
Thomas N. Berry, Stillwater	.....	5,883
J. W. Bird and William Hanley, Bradford, Pa.	4,945	5,844
F. A. Beverlin,* Wichita	.....	12,075
Bissett, Lytle and Gray, Tulsa	8,410	9,583
Bryan Petroleum Co., Tulsa	13,130	†23,448
L. L. Bush,* Chickasha	.....	2,872
G. H. and Annie Barker,* Shawnee	.....	2,776
W. I. Barker,* Ada	.....	2,269
J. G. Beard, J. L. Crump & S. I. Kolb,* Duncan	5,157	†7,424
Beard and Crump, Duncan	1,440	8,436
J. G. Beard and S. I. Kolb, Duncan	1,959	†13,195
C. B. Billington,* Shawnee	8,002	23,715
John J. Bowater,* New York	.....	6,770
C. E. Burlingame Corp., Bartlesville	4,588	6,248
S. W. Bates,* Konawa	.....	2,938
Mrs. James Ballard,* Cushing	.....	4,261
Hubert Barnum,* Kaw City	.....	2,947
May Blasdel,* Blackwell	.....	2,493
Belco Royalties, Inc.,* New York	.....	31,711
C. C. Bomberger,* Paden	2,131	2,757
J. F. Buck,* Shawnee	.....	2,500
O. V. Beck, Nocona, Texas	8,128	9,366
E. M. Boring, Oklahoma City	12,189	†14,863
Geo. S. Bole, Tulsa	10,919	†14,946
Geo. S. Bole,* Tulsa	1,685	†2,667
E. A. and Anna Bradley, Tulsa	5,449	6,517
Bu-Vi-Bar Petroleum Corp., Tulsa	.....	†14,511
Barbara Oil Co., Oklahoma City	7,090	†14,249
William Buck,* Wetumka	.....	3,389
Bart Royalty Co.,* Bartlesville	6,564	9,353
A. O. Baker,* Shawnee	.....	3,930
I. M. Bumpass,* Duncan	.....	2,112
Brandenburg Bros.,* Norman	.....	4,667
Jno. B. & Michael Brandenburg & Sons,* Norman	.....	39,244
Burke-Greis Oil Co., Tulsa	74,416	113,213
Burke-Greis Oil Co.,* Tulsa	.....	18,336
Braman Oil Co., Inc., Tulsa	3,685	5,110
Blackwell Oil and Gas Co., Cushing	.....	548,583
Barnsdall Oil Co., Tulsa	1,291,902	†1,801,406
Barnsdall Refineries, Inc., (Suspense) Tulsa	9,670	12,436
H. A. Born,* Seminole	.....	2,940
Roy Buckner,* Wewoka	.....	2,497
Geo. M. Billings,* Enid	.....	3,248
R. A. Cowden,* Shawnee	.....	5,364
I. M. Clubb,* Kaw City	6,501	9,268
Cumberland Petroleum Co., Cleveland	6,758	6,577
Cortez Oil Co.,* Tulsa	12,752	†17,194
William S. Cline,* Newkirk	.....	2,526
Mrs. Clara Cherry,* Shawnee	.....	2,473
T. R. Crane, Trustee,* Mannford	.....	5,515
Chieftain Royalty Corp., *Tulsa	4,246	†6,008
Margie, Retha & Leola Cherry by Dan Shepherd, Gdn.,* Shawnee	.....	14,213
Central Valley Oil Co.,* Cleveland	.....	3,889
J. G. Catlett, Tulsa	.....	6,097
Anna Elizabeth Cox,* Ardmore	.....	4,114
Edwin B. Cox and Jake L. Hamon,* Ardmore	.....	26,220
Central National Bank, Trustee Under Trust Deed, * Okmulgee	.....	4,768
Helen and Albert T. Campbell,* Shawnee	.....	16,241
Conservation Oil Co., Tulsa	7,604	9,686
Cudahy Oil Co., Cleveland	12,283	13,143
G. W. Connelly, Caney, Kansas	.....	7,992
Continental Royalties Corp.-Royalties Syndicate, Inc.,* Tulsa	1,923	†2,613
Canadian Royalty Oil Co.,* London, Ontario	.....	3,475
Continental Petroleum Royalty Corp.,* New York	1,730	2,476
Columbian Royalty Co.,* Tulsa	2,005	2,834
Central States Production Corp., Tulsa	.....	†35,677
Clark and Cowden, Duncan	.....	17,345
Caddo Oil Co., Tulsa	27,472	32,990
Joe Carter,* Wewoka	.....	5,184
J. S. Cosden, Inc., of Okla., Ft. Worth	27,460	41,543
Laura A. Clubb,* Tulsa	.....	9,288
Herman D. Cornell, Trustee,* Tulsa	.....	2,937
Crews Estate, Enid	7,328	†12,624
S. C. Canary, Tulsa	6,004	6,896
C. C. Cherry, Gdn.,* Maud	.....	2,320
C. C. Cherry and Laura Cherry,* Maud	.....	52,131
R. C. Carpenter,* Elizabeth, N. J.	.....	2,981
Colonial Royalties Co.,* Tulsa	.....	6,162
Creo Oil Co., Tulsa	5,525	6,360
Central Commercial Oil Co.,* Tulsa	7,546	11,717
Cotton Creek Oil Co., Wichita Falls	7,168	8,682
Dillard H. Clark, Jr.,* Ponca City	.....	3,426
J. D. Campbell,* Seminole	.....	18,080
L. K. Cherry,* Lindsay	.....	5,610
V. H. Cherry,* Lindsay	.....	8,074
R. R. Culbertson,* Maud	.....	5,980
J. E. Crosbie, Inc., Tulsa	49,179	72,992
Consolidated Gas Utilities, Oklahoma City	.....	†14,786
Central Oil Royalties, Inc.,* N. Y. City	.....	5,734
Cedar Gas Co., Bartlesville	.....	†5,099
Champlin Ref. Co., Enid	229,742	†357,300
Consolidated P. L. Co., Sand Springs	.....	887
Consolidated P. L. Co.,* Sand Springs	.....	2,218
Cities Service Gas Co., Bartlesville	.....	†103,723
Coline Oil Co., Oklahoma City	47,798	42,713
Ccmar Oil Co., St. Louis	627,254	947,976
Continental Oil Co.,* Tulsa	3,254	4,505
Continental Oil Co., Denver	101,468	†135,470
Continental Oil Co., Wichita Falls	12,487	†17,157
Continental Oil and Refining Co., Independence	4,440	5,720
Carter Oil Co., Tulsa	2,718,560	†3,971,328

XUM

Name, Address—	Barrels	Amount
J. C. Doneghy,* Tulsa	12,227	19,784
B. F. Davis,* Wewoka	.....	17,379
M. S. Douglass,* Weleetka	.....	2,952
Euler Davis,* Clearview	.....	2,386
C. E. Denny,* Alma	.....	2,183
J. F. Darby,* Muskogee	.....	2,044
J. H. Dickson,* Tulsa	7,623	10,403
Annie Day,* Earlsboro	4,814	6,374
J. F. Day,* Earlsboro	2,407	3,187
Delaware Consolidated Oil Co., Tulsa	.....	47,158
Delk Investment Corp.,* St. Louis	2,017	†330
W. H. Desmond,* Seminole	.....	4,399
Darby-Lynde Co., Tulsa	12,106	†20,690
Doss Oil Royalty,* Oklahoma City	.....	16,699
Denver Prod. & Ref. Co.,* Okmulgee	90,780	†125,685
E. H. Daly and J. A. Swindler	3,634	†5,851
J. J. Deaner, Okmulgee	10,256	14,070
J. J. Deaner,* Okmulgee	1,471	2,140
E. H. Daly and J. A. Swindler, Tulsa	3,634	†5,851
H. T. Douglas,* Shawnee	.....	13,332
M. C. Davis, *Maud	.....	7,309
O. H. Douglass,* Okmulgee	.....	5,180
J. H. Dillard Estate by Vida Dillard,* Ardmore	4,494	5,528
V. E. Dillard,* Ardmore	.....	4,574
E. D. Davis Oil Co., Oklahoma City	.....	6,108
Dickson Oil Royalty Co.,* Tulsa	3,249	4,468
Dixie Oil Co., Inc., Shreveport	76,561	†136,076
Deep Rock O. & R. Co., Tulsa	27,934	†39,243
Delmar Oil Co., Bartlesville	17,969	†25,228
Darby Petr. Corp., Tulsa	141,019	181,019
Darby Petr. Corp., Tulsa	.....	†58,524
Devonian Oil Co., Tulsa	46,640	63,848
Darby Lynde Co., Tulsa	12,106	16,134
Darby Lynde Co., Tulsa	.....	†4,555
Elm Oil Co., Tulsa	8,018	†9,661
Elm Oil Co.,* Tulsa	2,151	†2,823
P. C. Elswick,* Lamont	.....	5,530
Enid Bank and Trust Co.,* Enid	.....	5,086
Lea R. Ellis,* Tulsa	3,281	4,446
Ellis Drilling Co., Wichita Falls, Texas	4,613	5,636
W. H. Ellison,* Asher	.....	3,337
Eastern Royalties Corp.,* New York	.....	6,505
Eagle-Picher Lead Co., Henryetta	2,447	†5,580
Emery Bros., Bradford, Pa.	1,145	1,616
Lewis Emery Jr and Sons, Bradford, Pa.	5,138	4,982
Equitable Royalty Corp.,* Oklahoma City	.....	32,957
T. T. Eason,* Enid	1,407	2,193
Eagle Gasoline Co., Tulsa	.....	†5,698
A. J. Erlewine et al, Wilson	6,177	6,843

Name, Address—	Barrels	Amount
Elliott and Vensel, Tulsa	.....	6,382
Engineers Royalties, Inc.,* New York	.....	3,697
Elliott and Smith, Tulsa	4,684	5,474
Empire Oil & Refining Co.,* Bartlesville	354,978	†494,004
T. T. Eason,* Enid	1,407	2,193
Lena Fitzgerald,* Blackwell	.....	4,653
J. P. Flanagan,* Tulsa	.....	11,338
Wirt Franklin and Mary Cecile Gates by Liberty Natl. Bank,* Oklahoma City, Trustee	1,812	†2,209
D. C. Fitzgerald, Trustee, Ardmore	5,866	6,934
H. B. Folk,* Sand Springs	2,647	3,697
D. C. Fitzgerald,* Ardmore	1,948	2,570
Laura L. Fyke,* Shawnee	.....	15,786
Finance Oil Co., Gowanda, N. Y.	13,265	15,923
A. M. Fowler,* Wewoka	.....	4,136
W. H. Franks.* Seminole	.....	13,670
Rosie J. Franks,* Seminole	.....	8,373
Fern Oil and Gas Co., Yale	7,648	9,892
J. C. Fare,* Wewoka	.....	5,580
James F. Foster,* Clovis, New Mexico	.....	4,026
Fort Ring Oil and Gas Co., Ft Worth	.....	10,961
Fixico Minors-Addison Sessions, Gdn. in Oklahoma,* Okmulgee	1,353	1,877
G. W. Frazier,* Kingfisher	.....	7,960
Fox Royalty Co., Tulsa	5,120	5,315
Fox Royalty Co.,* Tulsa	4,683	4,435
Foster Oil Co., Tulsa	.....	8,651
W. W. Fondren,* Houston	1,834	2,247
Foster and Davis, Inc., Bartlesville	8,709	10,620
Foster Petroleum Corp., Bartlesville	229,484	291,166
Foster Petroleum Corp.,* Bartlesville	29,898	39,636
D. W. Franchot and Co., Tulsa	35,484	† 45,587
H. B. Fell, Receiver United Eight Oil Trust, Ardmore	12,580	16,971
Furhman Petroleum Co., Okmulgee	.....	359,794
Alice Fleet,* Ada	.....	2,102
Alice Fleet,* Guardian, Ada	.....	5,068
John J. Fleet,* Ada	.....	2,137
D. F. Fleet,* Ada	.....	20,814
Faye K. L. Farwell,* Chickasha	.....	2,176
K. C. Farwell,* Chickasha	.....	9,914
Samuel Freid Estate by Boyd B. Horsman,* Sulphur	.....	27,381
E. E. Fenner,* Alfred, New York	.....	2,203
Future Development Co., Tulsa	1,416	†7,199
Wirt Franklin,* Ardmore	9,992	12,039
Wirt Franklin Petroleum Co., Ardmore	182,387	221,956
Wirt Franklin by Liberty Natl. Bank, Trustee, Ardmore	3,191	†3,773
J. Wood Giass,* Nowata	4,441	5,258
W. E. Grisso,* Seminole	.....	66,729
W. D. Grisso,* Seminole	.....	5,954

TIGHT



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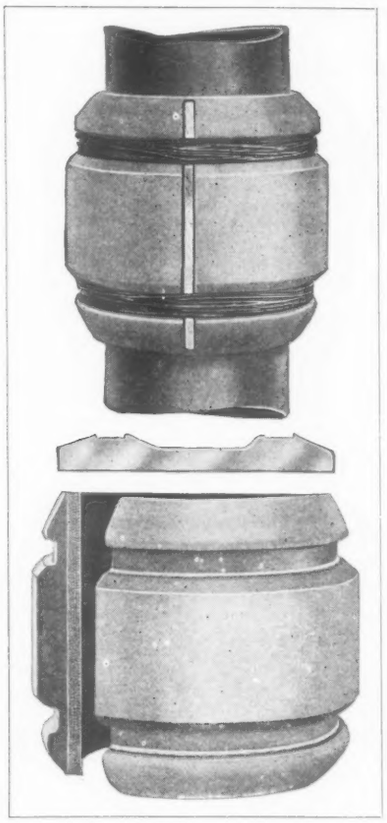

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—the RUBBER protectors with the grip of STEEL

. . . will outwear all others—rubber is in its natural state, unexpanded.

. . . will not move under normal drilling conditions, all of your pipe being protected all of the time.

. . . easily installed without breaking a tool joint—no special installation equipment needed.

. . . will not jump a tool joint or "pop off" under extreme pressure.

. . . 100% salvage value—can be removed easily when pipe is ready to be laid down or discarded.

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. . . multiplies pressure 2½ times.

. . . compounded 2½ to 1 against the "kick".

. . . heavier steel bands.

. . . greater braking surface.

. . . easily adjusted at top of drum.

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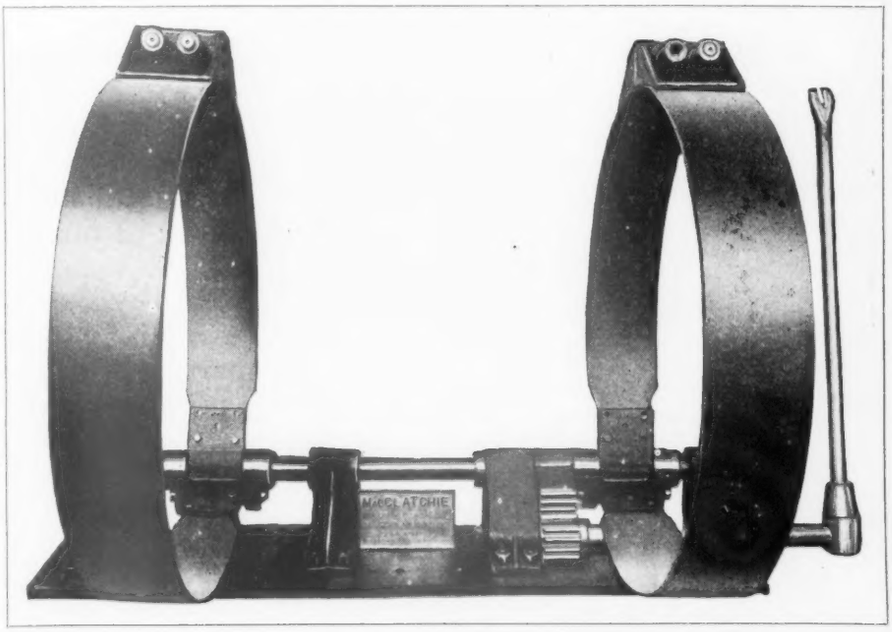


MacCLATCHIE MANUFACTURING COMPANY

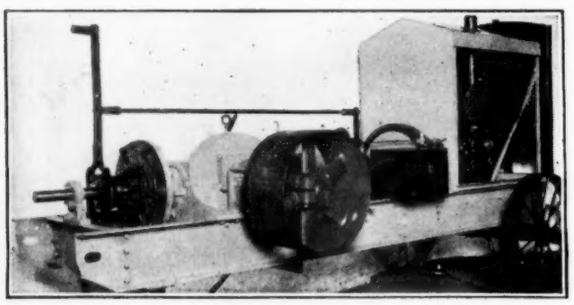
COMPTON, CALIFORNIA

MacCLATCHIE

Say you saw it in The OIL WEEKLY

Name, Address—	Barrels	Amount
Walter H. Grant, N. B. Feagin and Knox L. Garvin,* Ardmore	2,267	2,691
H. A. Gelser,* Fillmore, New York	2,662	3,648
L. L. Greer,* Tulsa	.....	2,340
J. C. Green,* Maud	.....	6,648
J. C. Gully,* Oklahoma City	.....	2,074
W. H. Gammon,* Maud	.....	9,394
Samuel Giblet Estate by L. O. Sparks, Admr.	.....	20,308
J. C. Gilbreath,* Shawnee	.....	5,980
Guaranty Trust Co.,* Brooklyn, New York	.....	43,408
Ethel Glenny,* Blackwell	.....	2,493
James H. Graham, Tulsa	4,847	7,662
J. M. Gillette,* Tulsa	1,590	2,228
V. L. Goltry, Trustee,* Enid	.....	2,451
B. M. Green,* Wynnewood	.....	5,367
B. C. Getzelman,* Algonquin, Illinois	.....	24,115
W. A. Graham, Estate,* Clarion, Pennsylvania	.....	2,447
Goldelline Oil Corp., Oklahoma City	8,178	10,154
General Royalties Corp.,* Enid	.....	15,982
Ed Gardner,* Stroud	.....	2,009
Galt-Brown Co., Ardmore	5,072	6,760
Myrtle Green and Guardian, Oklahoma City	3,592	†4,908
Florence N. Graham,* Tulsa	.....	6,359
W. A. Gibson,* Tishominga	.....	2,894
Mary Goforth (Suspense),* Seminole	.....	10,415
Glidden Oil Corp., Tulsa	6,910	†8,859
Gled Oil Co., Tulsa	16,194	24,579
Glenora Refining Co., Bristow	.....	5,188
N. T. Gilbert and Jos. Glass, Receivers, Turman Oil Co., Tulsa	147,824	†210,529
Glass and Harmon, Nowata	8,877	10,822
M. E. Gaskill, Tulsa	16,535	†23,086
R. F. Garland and Co., Tulsa	14,516	†21,088
F. A. Gillespie and Sons Co., Tulsa	19,607	20,310
Grimes and Gillespie, Tulsa	11,810	15,473
Gates Oil Co., Ardmore	9,270	9,832
Gardner Petroleum Co., Tulsa	19,678	28,162
Gorton Trust, Cement	9,275	11,093
Gilmer Oil Co., Ardmore	47,810	†53,474
Gilcrease Oil Co., Tulsa	.....	83,537
Gypsy Oil Co.,* Tulsa	3,595,427	†5,286,529
Grimes and Gillespie, Tulsa	.....	15,473
J. D. Green,* Maud	.....	12,554
W. E. Gayer, Tulsa	6,452	4,546
E. B. Grubbs and B. H. Young, Okmulgee	.....	5,674
Halsell and Son Oil and Gas Co., Vinita	3,756	†5,585
Ewing Halsell,* Vinita	1,622	†2,277
W. T. Hales, Oklahoma City	44,072	†51,360
W. T. Hales,* Oklahoma City	3,231	†4,081
Roy Harris and Drotha Harris,* Maud	.....	6,605
Harland Oil Co., Wolco	14,613	†18,278
W. D. Hallum,* Maud	.....	9,561
Howard Petroleum Corp., Tulsa	74,911	102,780
Henderson Oil Co., Marietta, Ohio	6,611	7,236
H. G. Hendrickst, Atty-in-fact, O'Rourke Oil Co.,* Bristow	8,779	9,333
Irene Hembree by Bert Harris,* Maud	.....	26,016
Alva Hembree by Bert Harris, Maud	.....	26,016
Una Hembree by Bert Harris, Maud	.....	26,016
Dora Hembree by Bert Harris, Maud	.....	26,016
Annie Hembree by Bert Harris, Maud	.....	26,016
W. N. Hudson,* Miami, Florida	.....	5,454
Mina B. Hudson,* Miami, Florida	.....	5,454
Mesia Ham,* Washington	.....	6,748
A. D. Horton, Agent,* Hawarden, Iowa	4,638	4,960
J. C. Hartley, Agent,* Garber	.....	4,209
Highway Oil Refg. Corp., Tulsa	104,236	†142,748
S. B. Mammons,* Seminole	.....	4,238
J. E. Hall,* Holdenville	.....	5,839
Enoch M. Harris,* Berwyn	.....	2,422
R. T. Harber,* Seminole	.....	2,802
E. P. Harwell, Tulsa	10,777	†5,620
Carl B. Haun,* Blackwell	.....	2,366
J. A. Hull Co., Tulsa	64,235	†88,248
G. W. Hildebrandt,* Oklahoma City	1,882	2,600
Nora Hernstadt,* New York	3,697	4,252
Hargrove Hudson, Tulsa	.....	10,003
Hargrove Hudson,* Tulsa	.....	11,341
Hilltop Investment Co.,* St. Louis	.....	8,243
P. J. Hill,* Shawnee	.....	6,090
A. G. Hudspeth,* Lexington	.....	38,703
D. Hearn,* Marshall	.....	2,831
Home Stake Oil and Gas Co., Tulsa	.....	9,776
Emma Gertrude Harman,* Guthrie	.....	4,238
J. Hammons,* Shawnee	.....	15,140
Harris and Haun, Inc., Blackwell	.....	18,033
Jonas Hostettler,* Holdenville	.....	2,475
L. Hull,* Seminole	.....	2,393
Healdton Oil and Gas Co.,* Enid	3,007	4,393
Healdton Oil and Gas Co., Enid	14,641	22,564
E. L. Harris, Trustee,* Tulsa	.....	16,298
O. R. Howard, Tulsa	79,431	106,856
Homaokla Oil Co., Oklahoma City	199,334	224,972
Homaokla Oil Co.,* Oklahoma City	7,727	8,630
Houston Oil Co. of Texas, Houston	16,492	†22 660
Home Gas Co. of Cushing, Cushing	11,496	†27,183
E. N. Horton,* Ardmore	.....	2,160
Harris-Hays Co.,* Okmulgee	5,806	8,926

Two Important Qualities ◆



PARTS STATIONS

Boston, Mass.—Rapp-Huckins Co. Inc., 59 Haverhill Street.
Buffalo, N. Y.—Edward W. Rode, 45 A. St.
Cleveland—Industrial Engine Parts, Inc., 1053 E. 61st Street.
Chicago—Motive Parts Co. of America, Inc., 2419 Indiana Ave.
Des Moines—Motive Parts Co. of America, Inc., 1204 W. Grand Ave.
Detroit—Whitney Brothers, 6464 Epworth Blvd.
Houston, Tex.—Portable Rig Co., Inc.
Fort Worth, Tex.—Fort Worth Wheel & Rim Co., 312 Throckmorton St.
Los Angeles—Coast Machinery Corporation, 406 E. Third St.
New York City—John Reiner & Company, Inc., 309 Church St.
Philadelphia, Pa.—Maerky Machine Wks., 632 Race St.
Pittsburgh, Pa.—Motive Parts Co. of Pa., 6314 Penn. Ave.
Raleigh, N. C.—Motor & Equipment Co., 215 E. Davie Street.
San Francisco—F. Somers Peterson Co., 57 California Street.
Tulsa, Okla.—Buda Engine Service Co. of Tulsa, Inc.

SEE how simply, yet effectively, the use of two Twin Disc clutches enables the Young Drilling Engine to do its work. First one clutch and then the other absorbs all the shocks and strains incident to reversing the motion of the drive pulley and its load.

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Baltimore	Chicago	Detroit
Cleveland	New Orleans	Pittsburgh
New York	Buffalo	Ft. Worth
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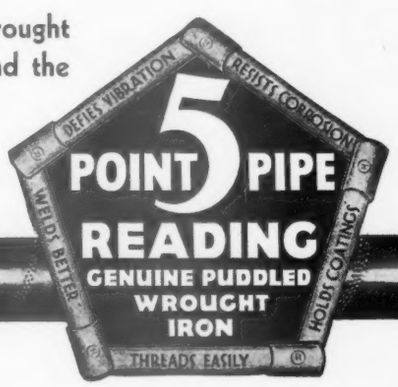
READING PIPE
DIAMETERS RANGING FROM 1/8 TO 20 INCHES



Say you saw it in The OIL WEEKLY

XUM

Name, Address—	Barrels	Amount
Hayner Royalty Corp.,* Tulsa	.....	3,059
J. W. Henry, Tulsa	6,920	10,447
E. T. Hanlon,* Tulsa	10,335	15,823
Cora Ella Harmon,* Hennessey	.....	3,419
Max Hesslein,* New York City	.....	4,698
John F. Hayden,* Tulsa	1,633	2,016
W. E. Harber,* Seminole	.....	9,721
J. N. Harber,* Seminole	.....	3,085
T. J. Hughes Oil Corp., Cushing	.....	5,029
Harold Petroleum Co., Blackwell	.....	15,089
Hemlock Oil Co., Tulsa	17,686	24,875
Home-Stake Oil and Gas,* Tulsa	.....	141,120
Humble Oil and Refining Co., Houston	229,828	†263,368
Hewitt Mineral Corp., Ardmore	.....	10,112
Healdton Petr. Co., Ardmore	.....	11,958
J. E. Hosack, Blackwell	.....	7,887
H. L. Ingram,* Shawnee	.....	3,295
J. A. Ingram,* Shawnee	.....	41,831
Harold M. Iseman,* Oklahoma City	.....	2,040
Imperial Royalties Co.,* Kansas City	.....	200,126
A. B. & L. F. Ice and Ice Drilling Co., Tulsa	4,375	†6,106
Indian Royalty Co.,* Tulsa	111,497	192,090
Ingram Royalty Co.,* Shawnee	.....	13,707
O. M. Irelan, Sapulpa	4,291	†6,814
Investors Royalty Co., Inc.,* Tulsa	86,526	123,905
Imo Oil and Gas Co., Covington	.....	11,199
Iron Mountain Oil Co., Tulsa	11,689	†15,624
Indiana Oil and Gas Co., Tulsa	24,906	30,119
Indiana Oil and Gas Co., Tulsa	.....	†2,769
Indian Territory Illuminating Co., Bartlesville	1,890,437	†3,052,274
Independent Oil and Gas Co.,* Tulsa	2,274,593	†3,202,795
Interocean Oil Co., Tulsa	35,104	43,446
J. Edward Jones,* New York City	.....	11,883
R. G. Jennings, Pittsburgh	6,482	9,154
E. H. Jennings Bros Co., Pittsburgh	4,052	†5,072
Randolph P. Jennings,* Beverly Hills, California	.....	52,949
John B. Jameson, Concord, New Hampshire	22,452	33,119
J. T. Johnson,* Sulphur	.....	3,115
U. S. Joines,* Ardmore	.....	2,238
R. C. Jones and Co., Inc., Cushing	.....	13,523
C. W. Johnston,* Seminole	.....	2,457
Jarvis, Zollinger and Andrews, Trustees,* Shawnee	.....	10,745
Johnson Oil Refg. Co., Chicago, Ill.	4,328	5,579
B. F. Johnson and Mary Eva Johnson,* Fayetteville, Arkansas	.....	3,475
Robert L. Jones,* Bristow	2,614	†9,041
J. Alfred Johnson,* Ardmore	.....	†2,688
L. B. Jackson, Sapulpa	.....	13,775
L. B. Jackson,* Sapulpa	.....	3,941

Name, Address—	Barrels	Amount
Florence Jenkins and Marjorie Walker,* Tulsa	.....	2,066
C. O. Johnson and Geo. C. Pendleton, Rec.,* Durant	.....	5,695
Josey Oil Co., Tulsa	160,057	†247,553
Willard Johnston,* Shawnee	.....	5,086
Kirk Oil Co., Ardmore	5,027	†6,040
Helene Walker King,* Orange, California	.....	16,366
Helene Walker King,* Guardian, Orange, California	.....	4,942
M. E. Killingsworth,* Seminole	.....	18,145
Geo. W. Kinney,* Tulsa	1,889	2,590
J. W. Krummi,* Okeham	.....	3,196
Nettie Klein,* New York	.....	19,242
Mark Kanner,* New York	.....	16,297
J. D. Kimmel,* Tulsa	.....	2,260
Kreola Oil Co., Ardmore	.....	6,436
Emma B. Kennedy and Trustee,* Okemah	.....	4,964
Kreola, Colcord and Commerce, Ardmore	.....	8,556
Sarah J. Knotts,* Stillwater	3,195	4,980
L. R. Kershaw,* Muskogee	.....	4,433
C. C. Kimble,* Beggs	.....	4,933
King Royalty Co., Wichita Falls	9,785	11,897
I. and L. Keck,* Nocona, Tex.	.....	2,870
Chas. E. Knox, Enid	3,872	†6,527
Kay and Kiowa Oil Co., Tulsa	5,680	†9,161
Kay Co. Gas Co., Ponca City	.....	†29,433
Kay Oil Co., Blackwell	26,656	28,715
R. R. Kisner,* Enid	.....	2,140
Minnie L. Kisner,* Enid	.....	2,140
Karcher-Henry, Tulsa	119	†10,709
W. L. Kistler, Inc.,* Tulsa	11,192	15,904
W. L. Kistler, Inc., Tulsa	24,975	32,561
Frank Knappemburger,* Phoenix, Ariz.	.....	4,491
Kingwood Oil Co., Okmulgee	66,799	†97,723
Kewanee Oil and Gas Co., Titusville, Pa.	306,729	†465,742
Keener Oil and Gas, Tulsa	42,319	†48,412
Keener Oil and Gas Co.,* Tulsa	1,169	†2,042
John L. Kirkland and Son, Tulsa	4,990	5,473
Lewis Production Co., Pittsburgh	119,056	172,507
B. D. Lack Co.,* Oklahoma City	.....	13,309
Matsye B. Lack,* Oklahoma City	.....	9,818
B. D. Lack,* Oklahoma City	.....	4,715
Nites Linn,* Oklahoma City	.....	2,159
Ivan Linn,* Oklahoma City	.....	2,159
C. H. Lebow, Tulsa	7,590	10,835
C. H. Lebow,* Tulsa	1,778	2,319
E. D. Lindley,* Alex	.....	45,249
Joseph C. Looney,* Wewoka	2,036	2,650
Wade Lewis,* Harlan, Iowa	3,001	4,484
A. M. Landon, Independence, Kansas	6,245	†7,751
Lawton Corporation, Oklahoma City	1,389	5,143

Powerful!
Increasing loads are steadily increasing the strains on rotary lines; and just as steadily increasing the need for more powerful cables.
Specially drawn imported steel wire gives to Yellow Strand Rotary Lines the strength and durability so necessary for economical operation. This special wire is not found in any other cable.
For economy's sake, specify Yellow Strand Rotary Lines.
Write for Catalog 41.
BRODERICK & BASCOM ROPE CO., St. Louis, Mo.
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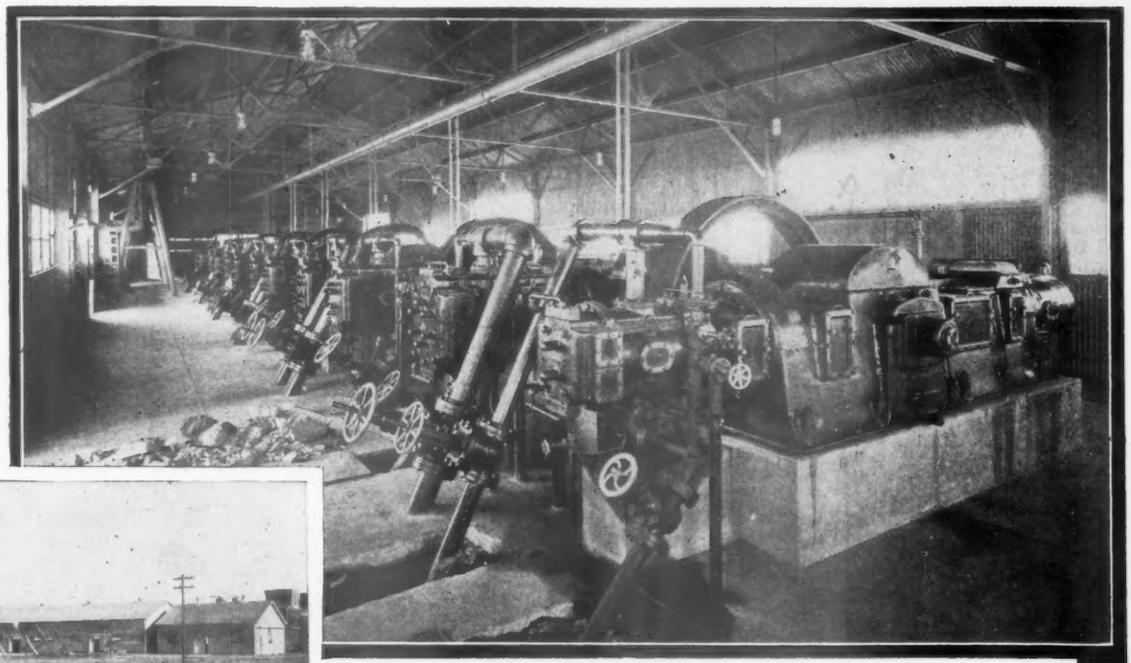


A Battery of Bessemer Type Ten Compressors in The Magnolia Petroleum Company's gasoline plant, Gray County, Pampa, Texas

Their dollar value is still a challenge!

FOR THIRTY YEARS Bessemers have been the standard of Oil Field Power Equipment value.

Advanced engineering keeps Bessemers ahead of the times and assures you an engine that will still be new even after it is old.

Precision workmanship and the highest grade of materials reduces servicing and increases running time—so that Bessemer's 99%+ performance is unsurpassed.

Oversize, overstrength construction means more years of low-maintenance operation—a feature that makes Bessemers cost a great deal less per operating hour.

Compare a Bessemer with any similar equipment, judge them point by point, and you will clearly see *why* Bessemer value is still outstanding.

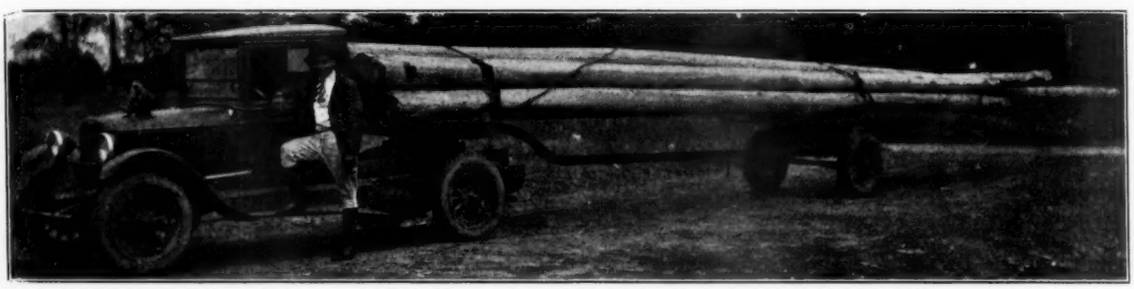
THE COOPER-BESSEMER CORPORATION
FORMERLY
The C. & G. Cooper Company and The Bessemer Gas Engine Company
Mount Vernon, Ohio Plants Grove City, Penn.
1116 Magnolia Bldg., Dallas 615 Kennedy Bldg., Tulsa
630 East 61st Street, Los Angeles, Cal.

BESSEMER

Say you saw it in The OIL WEEKLY

XUM

Name, Address—	Barrels	Amount
John Lahman,* Altus	.....	4,594
La Force and Ferguson,* Limon, Colorado	.....	4,793
Harry Lambing,* Newkirk	.....	2,795
Little Fay Oil Co., Tulsa	7,301	†7,982
W. S. & Amy Livingston,* Seminole (Suspense)	.....	5,212
W. T. & Lylus A. Laughlin,* Oklahoma City	.....	4,022
Lesh and McCall et al, Nocona, Texas,	18,235	12,035
J. W. Linn,* Shawnee	.....	2,159
Little Nick Oil Co., Chickasha	.....	31,895
C. K. Lambert and J. A. Spicer, Okmulgee	7,411	10,511
Lima Oil and Gas Co., Bartlesville	2,370	†50,410
J. H. Long, Duncan	.....	7,749
Link Oil Co., Tulsa	15,849	†20,982
Park B. Lamberton,* Tulsa	1,464	2,072
Lone Eagle Oil and Gas, Duncan	7,573	10,088
LeFlore County Gas and Electric Co., Poteau	.....	10,370
T. E. Laselle, Ada	15,638	20,069
Nancy J. Laughlin,* Cushing	.....	2,168
Andrew W. Loebl,* New York	.....	2,403
Lotus Oil Co.,* Kansas City	1,631	†2,355
Laurel Oil and Gas Co., Philadelphia	187,609	†244,953
Liberty Royalties Corp., Tulsa	16,949	23,454
Lilac Oil Co.,* Tulsa	2,758	3,966
Louisiana Oil Refining Corp., Shreveport	91,394	†95,193
Lone Star Gas Co., Dallas,	9,588	†9,685
Lone Star Gas Co., Dallas	.....	5,378
Larger Oil Co., Bartlesville	3,622	†5,427
W. C. McBride, Inc.,* St. Louis	.....	26,147
W. F. McDaniel,* Blackwell	.....	3,393
J. H. McBirney,* Tulsa	.....	2,226
S. H. McKee,* Tonkawa	.....	7,509
I. R. McQueen,* Oklahoma City	5,299	7,315
R. L. McGee,* Asher	.....	16,840
Eli B. McCully,* Hennessey	.....	3,757
Nellie McGee,* Asher	.....	5,452
J. M. MacDonaugh,* New York	.....	2,497
Charles McCully,* Hennessey	.....	3,757
Emma McCully,* Hennessey	.....	3,757
McRoberts Royalty Co.,* Tulsa	.....	5,302
Floyd McCaughtry,* Chickasha	.....	4,918
McGraw Oil Co., Tulsa	18,700	†22,949
Carrie L. McClure,* McAlester	.....	5,865
Mary B. McAlester,* McAlester	.....	5,965
McMan Oil and Gas Co., Tulsa	49,361	70,771
Henry MacDonald,* New York	.....	2,140
McGinley-Sigler Co., Ft. Worth	16,590	11,097
Jodie McGee,* Norman	.....	4,705
C. L. McMahon and C. L. McMahon, Inc., Tulsa	34,878	52,326
C. L. McMahon and C. L. McMahon, Inc.,* Tulsa	8,449	12,077
H. W. McGill, Adm. Estate of E. Davis (Paid under Protest) Ardmore	82,630	109,203
J. H. Maxey,* Oklahoma City	.....	2,615
R. J. Metcalf,* Ft. Worth	.....	3,099
Malernee Oil Co., Oklahoma City	4,106	†7,113
Jennie Mullendore, Cleveland	.....	12,794
E. C. Mullendore, Cleveland	.....	25,726
E. C. Mullendore,* Cleveland	.....	4,149
Marquette Oil Co., Tulsa	11,515	†32,197
J. F. Murphy, Sapulpa	.....	6,798
Sophia S. Mussellem*, Muskogee	.....	5,407
Midland Royalty Corp.,* New York	.....	6,336
Mid-Continent Royalties, Inc., New York	.....	2,612
Magee and Stipe, Electra, Texas	5.465	7,579
Dudley D. Morgan, Tulsa	.....	12,835
J. F. Martin,* Marlow	.....	3,115
Million and Thomas,* McAlester	3,707	4,265
Alice Clark Myers,* Santa Fe New Mexico	.....	3,436
J. H. Markham, Jr., Tulsa	93,105	126,066
J. H. Markham, Jr.,* Tulsa	2,112	3,028
Mudge Oil Co., Pittsburgh, Pa.	18,360	12,499
Morris National Bank,* Morris	.....	3,281
D. B. Mason, Tulsa	10,808	11,582
C. E. Morgan,* Holdenville	.....	5,753
M. B. "—Joe Paul, Trustee	.....	5,437
Marileen Oil and Gas Co., Blackwell	7,060	†9,740
Frank Meadors, Jr.,* Wetumka	6,832	11,166
F. W. Merrick, Inc., Ardmore	18,660	20,866
F. W. Merrick, Inc. and R. W. Coe, Trs., Ardmore	9,512	11,078
Ward S. Merrick, Ardmore	3,982	4,516
J. Read Moore,* Wewoka	.....	3,504
Maud Oil and Gas Co., Oklahoma City	.....	38,966
G. C. Mayhue,* Seminole	.....	3,651
W. E. Mayhue,* (Suspense), Ada	.....	3,651
E. L. Mayes,* Tulsa	.....	82,345
F. D. Misener, Tulsa	7,654	†8,763
E. R. Minshall, Tulsa	3,483	†5,511
Murphy Oil Co. of Pennsylvania, Philadelphia	4,741	5,344
Mul-Berry Oil Co., Cushing	.....	54,739
B. F. Melton,* Duncan	2,227	†4,922
Annie Meyer,* Sapulpa	.....	2,085
Clint Moore, Estate, Tulsa	19,195	27,031
Madden & Madden, Tulsa	19,460	25,671
Frank W. Miller, Trustee Warren Royalties,* Newark, New Jersey	.....	5,732
J. W. Maines,* Ada	.....	2,130
Major Oil Co.,* Okmulgee	.....	8,936
Midco Oil Corp., Tulsa	14,594	19,610
Meridian Gas Co., Dallas	.....	†23,424
Margay Oil Corp., Tulsa	152,360	202,196
Marland Production Co., Ponca City	414,172	†635,180



MARTINS AND MONKEYS

It doesn't make any difference to the MARTIN as to what it hauls—a load of long poles out of the East Texas woods with a monkey on the hood of the truck; a huge engine or boiler into the mud of the oil-fields or the endless lot of heavy materials needed in oil or logging camps in South America.

For the heaviest hauling there is the MARTIN eight-wheel wagon, for team or tractor, made from materials selected from our own sawmills, with the simple MARTIN patented design which enables the wagon to turn in the smallest circle without binding or skidding. MARTIN also manufactures truck bodies and carts, as well as the trailer shown.

"Martin Wagons Haul Anything"

THE MARTIN WAGON COMPANY
Lufkin, Texas

Wagons, carts, trailers, truck bodies, lumber buggies, a Martin Product always gives service.

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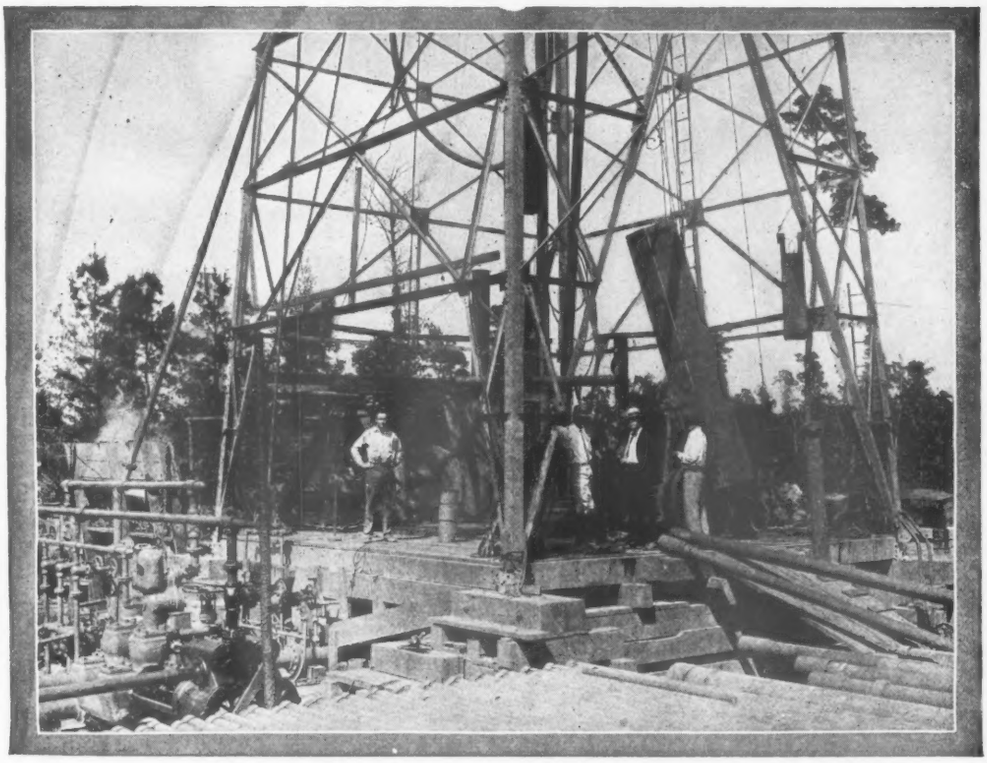

View of the platform of the Lake Charles, La., well of the Shell Petroleum Corporation, where "INCOR" was used to close a bad cavity encountered at a depth of 2,879 feet.

Difficult Oil Well Cementing Problems Solved with "INCOR"

WHEN a flow of water or a bad cavity holds up drilling operations, practical oil men now use "INCOR" Brand Perfected High-Early-Strength *Portland* Cement. Because "INCOR" is a perfected high-early-strength *Portland* cement, and contains no admixtures, it solves the toughest problems. A recent cementing job in a Lake Charles, La., well of the Shell Petroleum Corporation is a case in point:

A large cavity was encountered in the wall of this well at a depth of 2,879 feet. Operations could not continue until the cavity was closed. Ordinary methods failed. "INCOR" was used, the cavity closed and drilling operations resumed in 60 hours.

Use "INCOR" for difficult oil well cementing, for bottom hole work, for plugging non-producing holes, for filling crevices, and for quick construction of derrick corners, foundation beds, etc. "INCOR" contains no admixtures — requires no special methods of handling—mixes readily without lumping—and is actually quicker, easier, and less expensive to use than ordinary Portland cement with an accelerator.

INTERNATIONAL SYSTEM
LONE STAR CEMENT
PERFECTED HIGH-EARLY-STRENGTH
"INCOR"
REG. U.S. PAT. OFF.
PORTLAND CEMENT

Outstanding quality and a policy of fair business dealing have earned nation-wide recognition for LONE STAR Cement. Now, to meet the need for dependable 24-hour concrete, the makers of LONE STAR also offer "INCOR" Brand

INTERNATIONAL CEMENT CORPORATION

342 Madison Avenue, New York

One of the world's largest cement producers—13 mills... total annual capacity 20,000,000 barrels

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Birmingham, Alabama

LONE STAR CEMENT CO. INDIANA, Inc.
Indianapolis, Indiana

THE CUBAN PORTLAND CEMENT CORP.
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LONE STAR CEMENT CO. PENNSYLVANIA
Philadelphia, Pennsylvania

THE LONE STAR CEMENT CO. (KANSAS)
Kansas City, Missouri

LONE STAR CEMENT CO. VIRGINIA, Inc.
Norfolk, Virginia

LONE STAR CEMENT CO. NEW YORK, Inc.
Albany, New York

LONE STAR CEMENT CO. LOUISIANA
New Orleans, Louisiana

ARGENTINE PORTLAND CEMENT CO.
Buenos Aires, Argentina

LONE STAR CEMENT COMPANY TEXAS
Dallas and Houston, Texas

URUGUAY PORTLAND CEMENT COMPANY
Montevideo, Uruguay

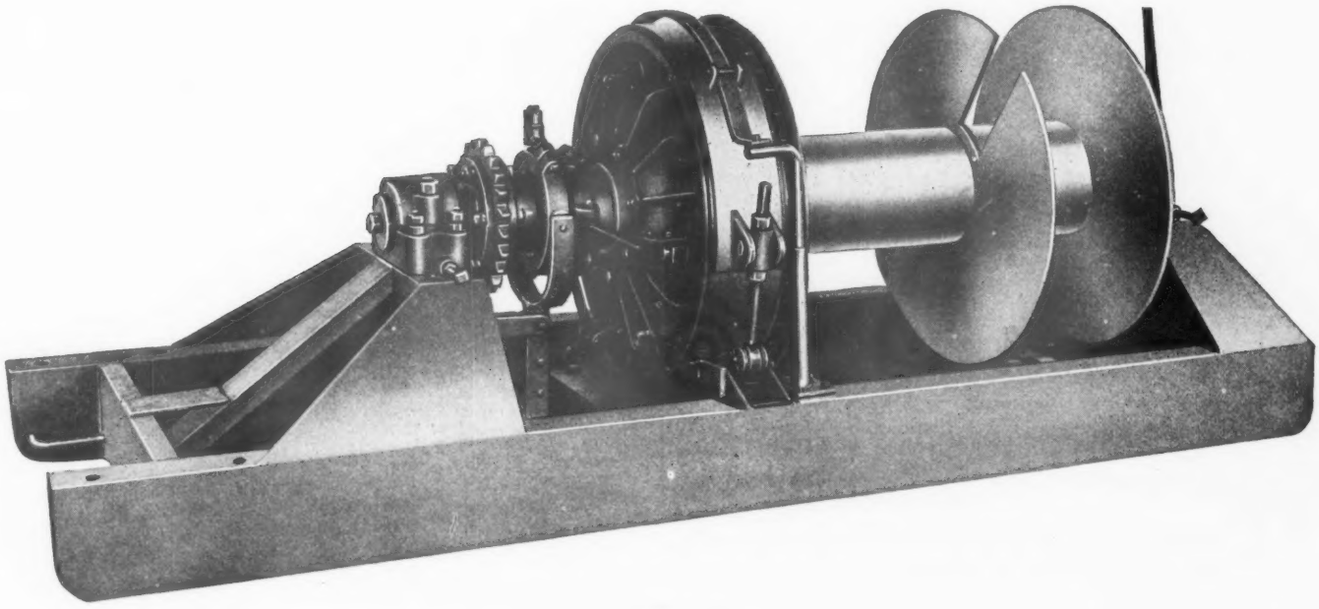
Say you saw it in The OIL WEEKLY

XUM

Name, Address—	Barrels	Amount
Mid-Continent Petroleum Corp.,* Tulsa	1,281,974	†1,740,232
Mid-Kansas O. & G. Co., Findlay, Ohio	330,318	†459,078
Magnolia Petroleum Co.,* Dallas, Texas	4,021,090	†5,352,252
McMahan Royalty Co.,* San Antonio	.....	3,496
Monarch Royalty Co.,* Kansas City	.....	52,262
Minnehoma Oil and Gas Co., Tulsa	93,305	124,283
Minnehoma Oil and Gas Co., Tulsa	.....	†10,642
Omer McKown and Son,* Maud	.....	3,552
Miller Bros. 101 Ranch, Marland	.....	9,881
National Refining Co., Cleveland	.....	9,788
W. C. Norris, Tulsa	.....	10,357
W. G. Newkham,* Maud	.....	2,121
Walter Newstadt, Ardmore	.....	5,607
R. L. Nelson,* Webb City, Missouri	.....	4,018
R. B. North*, Blackwell	.....	2,018
Eva E. Noble,* Ardmore	.....	7,947
Hattie E. Noble,* Ardmore	.....	2,950
Norwood Oil Co., Tulsa	7,766	8,966
Nowata Oil and Refg. Co., Tulsa	7,790	†9,682
A. S. Norvell,* Wewoka	.....	2,670
Nester Oil Co.,* Alex	.....	2,404
New England Oil and Pipe Line Co., Boston	33,863	57,590
Marjorie C. Nichlos, Chickasha	.....	8,349
Marjorie C. Nichlos,* Chickasha	.....	2,738
John B. Nichlos, Chickasha	.....	5,751
New York Petroleum Royalty Corp.,* New York	5,192	7,408
National Oil and Development Co., Tulsa	7,730	8,642
G. A. Nichols,* Oklahoma City	.....	2,521
National Union Oil & Gas Co., Blackwell	6,397	9,184
R. H. Nicholson,* Oklahoma City	.....	2,318
Oklahoma Royalty Co. of Canada,* Toronto, Canada	.....	123,609
Sarah Blanche Orwig,* Wewoka	.....	2,198
S. S. Orwig,* Wewoka	.....	10,643
Oil and Gas Royalties, Inc., Toronto	.....	2,479
M. S. Owen,* Cushing	.....	4,423
Ohio-Osage Oil Co., Tulsa	10,622	16,138
W. B. Osborn,* Ada	.....	4,156
Orit Securities Corp.,* New York	.....	3,967
Olean Petroleum Co., Bristow	3,585	19,990
Oklahoma Public Service Corp., Cedar Rapids, Iowa	.....	21,345
Oil State Petroleum Co.,* Enid	6,133	8,474
Oil State Petroleum Co., Enid	5,825	8,052
Oklahoma Power and Water Co., Sand Springs	.....	†15,411
W. G. Obins and H. C. Weber, Bartlesville	3,775	4,172
Ona Oil Co., Blackwell	.....	40,810
Ogg Petroleum Co., Muskogee	5,487	6,621
Oklahoma-Gulf Royalty Corp.,* Tulsa	.....	3,249
Ohio Fuel Supply Co.,* Columbis	17,411	25,414
Osage Gas Producing Co., Independece	298	†49,157
Oklahoma Natural Gas Corp., Tulsa	.....	†61,945
Oklahoma Gas Utilities Co., Chickasha	.....	82,510
Mrs. B. Ollie O'Dell,* Richmond, California	.....	10,978
O'Rourke Oil Co., Bristow	.....	9,333
Petroleum Co. and M. H. Mosier, Tulsa	9,640	†12,384
W. B. Pine, Okmulgee	80,959	109,650
W. B. Pine, Okmulgee,	761	†9,936
Lillie M. Priboth,* Blackwell	1,656	2,398
F. F. Priboth,* Blackwell	1,656	2,398
Peerless Oil and Gas Co.,* Indiana, Pennsylvania	10,304	15,253
Peerless Oil Producing Co., Tulsa	10,344	15,431
Pawhuska Oil and Gas Co., Pawhuska	.....	†11,949
John Panos,* Oklahoma City	.....	2,200
Mable Dale Potts,* Yale	3,988	5,870
W. G. Phillips and J. B. Milam, Chelsea	29,107	†33,855
O. H. Powell,* Maud	.....	7,294
W. B. Pine, Okmulgee	21,258	26,161
W. B. Pine and Phillips Petroleum Co., Okmulgee	35,388	49,880
O. J. Pharoah,* Henryetta	.....	6,760
Chas. Pfile,* Oklahoma City	.....	2,131
Provident Royalty Corp., Tulsa	.....	2,473
Petroleum Royalty Corp.,* Tulsa	5,257	7,461
Provident Royalties Corp.,* Tulsa	21,368	30,074
Phoenix Oil Co., Pittsburgh	28,931	40,747
Papoose Oil Co., Tulsa	90,244	†121,927
Pierce Petroleum Corp., Sand Springs	17,712	20,419
Producers Oil Co., Tulsa	15,197	20,572
Producers and Refiners Corp., (Suspense), Tulsa	8,866	12,176
Producers & Refiners Corp., Independence	.....	†19,808
Producers & Refiners Corp., Independence	278,684	249,381
Prairie Oil and Gas, Independence	3,988,914	†5,630,025
Prairie Oil and Gas, Trustee, Independence	3,581	4,345
Phillips Petroleum Co., Bartlesville	647,154	921,451
Phillips Petroleum Co., Bartlesville	3,552	6,450
Pure Oil Co., Chicago	2,751,582	3,829,292
Pure Oil Co., Chicago	.....	†57,731
Pure Oil Co. Gasoline Division, Chicago	.....	†36,766
Page Oil Syndicate, Tulsa	.....	10,621
Petroleum Rights Corp.,* New York	.....	17,453
Pawnee Oil Prod. Co., Tulsa	.....	5,540
Plymouth Petroleum Co. et al, Tulsa	8,933	11,284
Miller Bros., 101 Ranch Trust,* Marland	.....	9,881
Grace Payne,* Okmulgee	1,561	2,619
W. H. Pomeroy,* Tulsa	.....	2,930
J. A. Patterson,* Wewoka	.....	2,268
Fred E. Pettit,* Los Angeles	.....	2,156
Producers Royalty Corp.,* New York	.....	14,849
S. T. Palmer,* Okemah	.....	5,384
Pepper Oil and Gas Co.,* Oklahoma City	.....	25,477
M. F. Powers,* Tulsa	10,165	13,871
Pyramid Oil Co., Winchester, Ky.	5,848	6,604
John Perry,* Tulsa	.....	5,675
Waite Phillips,* Tulsa	1,942	2,882
Geo. C. Probst,* Tulsa	4,786	6,508
Producers Syndicate, Sayre	.....	†8,004
Geo. L. Pace, Wichita Falls	9,404	11,820
Carr Peterson, Haskell	.....	†12,602
Plains Petroleum Co., Inc., Tulsa	10,346	†14,449
Privett Drilling Co., Maramec	2,587	10,647
Perpetual Royalty Corp.,* Tulsa	.....	11,751
Perkins and Collum, Wichita Falls	7,202	9,047
B. G. Patton,* Okmulgee	.....	3,649
Petroleum Co., Tulsa	4,794	†6,100
N. J. and Alpha Price,* Okemah (Suspense)	.....	3,514
Paragon Oil Co., Tulsa	4,875	†6,641
Panther Oil and Gas Co., Oklahoma City	.....	10,251
Paraffine Oil Co., Houston	7,173	7,881
Pennok Oil Corp., Tulsa	27,609	†40,485
Petroleum Royalties Co.,* Tulsa	.....	134,648
Petroleum Producers Co., Wichita Falls	10,464	14,014
Pioneer Petroleum Co., Tulsa	13,600	15,415
Pauline O. and Gas Co., Oklahoma City	6,378	†8,497
C. P. Quinlan,* Tulsa	6,616	†9,216
Quinton Spelter Co., Quinton	.....	10,007
Quinton Relief Oil and Gas, Quinton	.....	†8,894
John Quimby,* Montebello, California	.....	5,307
Red Bank Oil Co., Tulsa	8,119	†10,233
C. Lothrop Ritchie,* Philadelphia	.....	2,165
Leslie Rogers,* Tulsa	4,315	6,022
J. W. Rainey,* Shawnee	.....	27,234
Eulahmae Reed,* Wewoka	.....	4,443
L. E. Regan,* Tecumseh	.....	3,688
Regal Oil and Gas Co., Tulsa	.....	15,007
Rena Royalty Co.,* Tulsa	5,857	8,598
Rena Royalty Co.,* Tulsa	23,119	34,112
Reynolds Oil and Royalty Co.,* Okmulgee	3,457	4,728
Reynolds Oil and Royalty Co., Okmulgee	14,233	20,103
B. P. Rudell,* Konowa	.....	7,347
M. L. Roscoe,* Burlingame, California	.....	8,513
Replogle and Johnston,* Oklahoma City	.....	4,225
J. W. Robins, Ft. Worth	7,926	7,216
Rex Oil and Gas. Winchester	5,848	6,603
Reiter-Foster Oil Co., Tulsa	104,438	147,033
Reiter-Foster Oil Co.,* Tulsa	4,762	6,715
Callaway Rogers and Rosa Rogers,* Earlsboro	.....	35,614
Dock Ramsey,* Ripley	28,881	2,186
E. L. Robinson and Gibson-Zahniser Oil Corp., Tulsa	4,961	†11,326
E. L. Robinson,* Tulsa	.....	6,792
Frank H. Reed,* Neosho, Missouri	.....	23,750
Reliance Oil Co., of Oklahoma, Houston	4,140	7,209
Isabelle S. Reed,* Neosho	13,812	21,329
Reserve Petroleum Co., Tulsa	18,420	24,734
Reserve Petroleum Co.,* Tulsa	2,814	4,028
Frank H. Reed and Isabelle S. Reed,* Neosho	38,138	51,995
Geo. C. Pendleton, Rec. for Red Bank Oil Co., Tulsa	37,610	48,631
Redoak Oil Trust, Ardmore	1,762	2,266
Rubana Oil Co., Winfield, Kansas	15	†13,343
D. Replogle,* Oklahoma City	.....	3,598
Jamie Replogle,* Oklahoma City	.....	5,136
Royalty Corporation of America,* Tulsa	56,234	74,119
Richard J. Roberts,* Wewoka	.....	4,919
Anna Ruzek,* Enid	.....	2,147
Reed and Harmon, Nowata	5,223	6,242
F. B. Ryan,* New York	.....	2,635
Scott Rouse,* Marshall	.....	4,682
Riverland Co.,* Tulsa	2,055	†2,649
Riverland Co., Tulsa	11,404	†15,875
C. E. Roth, Independence	4,599	5,565
J. S. Routt,* Okmulgee	20,904	29,676
W. A. Rookstool,* Norman	.....	12,200
Thomas C. Roberts, Ardmore	.....	6,172
Rockland Oil Co., Ardmore	26,926	27,957
Range Oil Co.,* Okmulgee	.....	2,102
Royalties Management Corp.,* New York	.....	15,742
J. A. Rockwell,* Warren, Pennsylvania	.....	6,424
Philo C. Robinson, gdn. Estate of Ed C. Robinson,* Los Angeles	.....	2,895
Dora C. Russell,* Duncan	.....	2,075
Joseph P. Rossiter,* Okmulgee	.....	2,655
Ryan Consolidated Petroleum Corp., Tulsa	5,819	7,562
Thomas Ryan by E. D. Hall, atty.,* Wetumka	.....	6,716
C. L. Richards,* Tulsa	.....	5,658
W. R. Ramsey, W. E. Ramsey and Ramsey Petroleum Corp., Oklahoma City	.....	190,189
Riverside Oil and Refining Co., Tulsa	.....	12,228
Jake Rutz Oil Co., Morris	.....	7,601
Savoy Oil Co., Tulsa	7,765	†8,986
Earl Spring,* Ryan	.....	4,183
Mossie Schonwald,* Oklahoma City	.....	3,142
Dr. Nathan Sulzberger,* New York	.....	2,303
Standard Royalties-Wewoka Corp.,* New York	.....	4,410
Standard Royalties of Canada, Incl.,* Toronto	.....	25,570
Clyde-W. D. Seay,* Oscar	2,618	3,033
Senace Royalties Co.,* Oklahoma City	.....	3,044
Pearl M. Snowden,* Philadelphia	.....	6,180
Jennie E. Strick,* Hennessey	.....	3,757
C. B. Shaffer, Chicago	37,787	41,345
Sidwell Drilling Co., Sapulpa	4,254	5,309
J. D. Shepherd,* Shawnee	.....	13,829
O. B. Surber,* Chickasha	.....	2,031
Moses A. Summerfield,* Memphis	7,126	9,706
Louise Strother by J. C. Greer, Trustee,* Martinsville, Virginia	.....	7,919

OCS

Chain Driven Sand Reel for 10,000-Foot Wells



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THE OIL COUNTRY SPECIALTIES MFG. CO.

COFFEYVILLE, KANSAS

Request Bulletin 90

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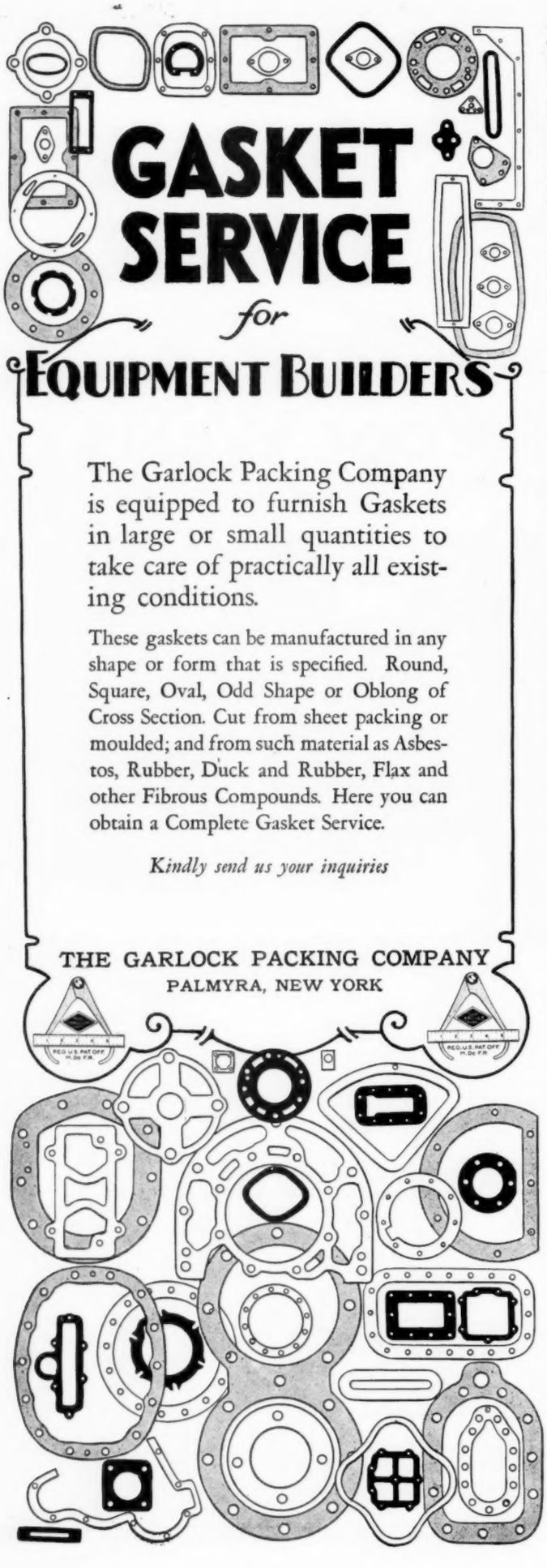
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The Garlock Packing Company is equipped to furnish Gaskets in large or small quantities to take care of practically all existing conditions.
These gaskets can be manufactured in any shape or form that is specified. Round, Square, Oval, Odd Shape or Oblong of Cross Section. Cut from sheet packing or moulded; and from such material as Asbestos, Rubber, Duck and Rubber, Flax and other Fibrous Compounds. Here you can obtain a Complete Gasket Service.
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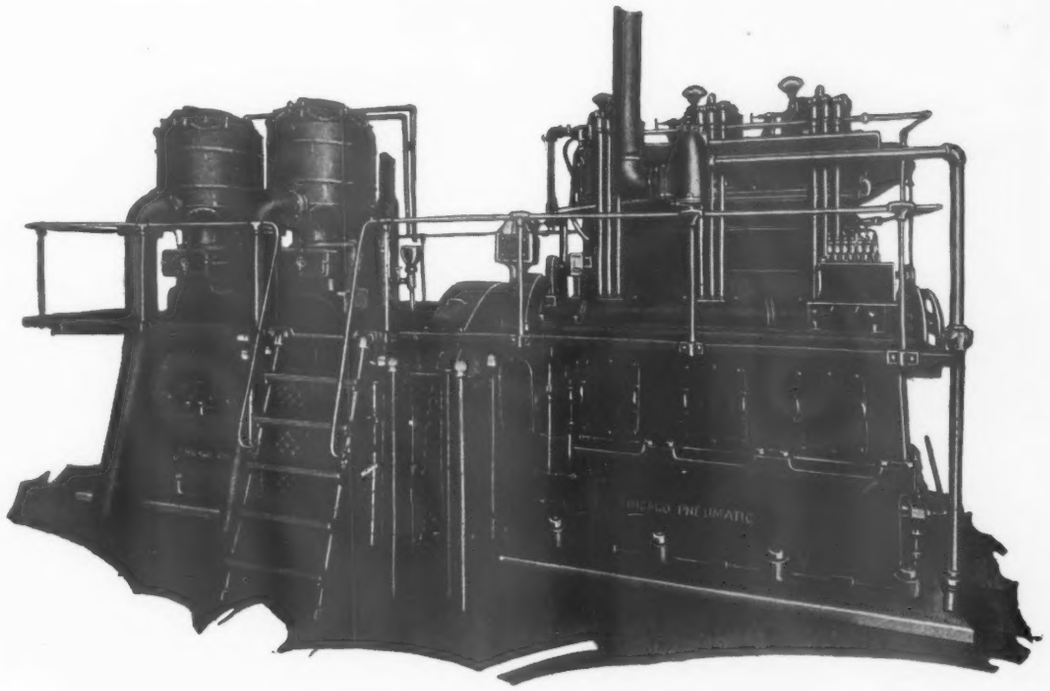
THE GARLOCK PACKING COMPANY
PALMYRA, NEW YORK

Name, Address—	Barrels	Amount
E. L. Smith Oil Co., Inc., Mexia	4,843	6,616
Geo. W. Sloan,* Winfield	.....	2,396
Steve Smith,* Blackwell	.....	2,493
Mrs. Lucy B. Smith,* Holdenville	.....	2,031
Arlie E. and Alice Strough,* Davenport	.....	2,577
Leona Smith,* Blackwell	.....	2,493
R. Earl Smith,* Blackwell	.....	2,493
W. J. Shields, Ft. Worth	.....	6,298
Phil N. Stuart,* Shawnee	.....	4,628
Mrs. Harriet W. Sparks,* Shawnee	.....	4,841
Joseph Summerfield, Sr.,* Memphis	7,126	9,706
Robert C. Sharp, Tulsa	4,588	6,248
Geo. W. Snedded, Tulsa	.....	7,325
Selby Oil and Gas Co.,* Tulsa	2,598	2,086
Selby Oil and Gas Co., Tulsa	26,680	†31,526
Sturm Drilling Co., Ardmore	13,474	†16,233
Sarasota Oil Co.,* Ardmore	3,469	3,564
Ira Shimp,* Blackwell	.....	6,632
Dave Schoewald,* Blackwell	.....	3,152
G. J. Smith,* Tulsa	.....	10,975
N. Bert Smith,* Oklahoma City	.....	7,240
C. R. Smith Estate,* Ardmore	3,839	4,228
Marie S. Smith, Ardmore	8,157	8,984
Chas. R. Smith,* Ardmore	6,631	7,283
Will H. Smith, Ardmore	4,757	5,157
Superior Oil Corp., Tulsa	219,401	†310,087
Sunray Oil Co., Tulsa	25,710	30,213
Southland Royalty Co.,* Ponca City	.....	64,595
Sun Royalty Co.,* Tulsa	16,823	23,125
Silurian Oil Co., St. Louis	106,403	†138,833
Tom Slick, Inc., Oklahoma City	860,871	†1,286,457
Tom Slick, Inc.,* Oklahoma City	9,560	†13,111
Schermerhorn Oil Co., Minneapolis	3,580	†27,441
Schermerhorn-Ardmore Co., Minnepolis	102,842	†105,458
J. B. Schermerhorn, Minneapolis	64,303	74,466
J. B. Schermerhorn,* Minneapolis	2,953	3,564
Shaffer Oil and Refining Co., Tulsa	380,365	†591,008
Sinclair Crude Oil Purchasing Co.,* Tulsa	3,185,572	†4,521,697
Skelly Oil Co.,* Tulsa	957,355	†1,320,598
Shell Petroleum Corp.,* St. Louis	1,563,972	2,249,434
Skelton Moore Oil Co., Bartlesville	5,330	6,342
Sinclair Refining Co., Tulsa	1,866	2,439
L. O. Sparks,* Oklahoma City	.....	20,308
C. B. Shaffer, Chicago	37,787	41,345
James A. Swindler, Muskogee	9,193	†9,311
Simpson-Fell Oil Co., Ardmore	28,225	30,669†
J. K. D. Shaffer,* Oklahoma City	1,853	†2,832
Sure Oil Corporation by N. T. Gilbert and Joseph Glass, Receivers	4,134	†5,334
Snowden and McSweeney Co., New York	67,233	†88,319
Sheridan Oil Co., Tulsa	14,665	†23,138
Sands Petroleum Co., Tulsa	21,017	†26,867
Southwest Production Co., Bristow	.....	†16,983
Leigh J. Sessions Corp.,* New York	.....	†5,998
Slab Oil Co., Ardmore	3,505	†6,158
Sans Bois Gas Co., Quinton	.....	14,552
Harry Stekoll, Tulsa	5,502	6,959
Simms Oil Co., Dallas	10,708	†14,968
B. B. Ralph,* Kansas City	.....	4,441
L. G. Stanley, Pawhuska	.....	19,504
Sneed Royalty Co.,* Tulsa	14,680	19,462
C. E. Sypes,* Ardmore	.....	2,996
Sterling Oil & Gas Co., Abilene	8,888	10,781
Katie Snell, Lee Brown,* Dustin	.....	2,292
Sunrise Oil Corp.,* Oklahoma City	.....	2,115
T. B. Slick, Clarion, Pa.	614,974	†900,778
T. B. Slick,* Clarion, Pa.	57,726	†82,688
Alice and T. J. Spencer,* Wewoka	.....	5,944
A. O. Simpson,* Ardmore	2,082	†2,881
W. E. Simpson,* St. Louis	2,082	†2,881
O. W. Seay,* Ryan	.....	8,742
Gracie I. and H. I. Shirley,* Tulsa	.....	2,018
E. D. Slough,* Ardmore	.....	2,214
H. F. Sinclair,* New York	.....	7,875
Sampson Oil Co., Tulsa	4,310	†5,528
Stratfield Royalty Co. and James L. Dolgoff,* New York	.....	3,287
R. J. St. Germain,* Tulsa	.....	3,140
Chas. R. Smith, Jr., Ardmore	.....	†7,178
C. R. Smith Estate, Ardmore	.....	†5,231
Marie S. Smith, Ardmore	.....	†9,772
G. F. Smith, Tulsa	.....	10,735
Tri-County Gas Co., Tulsa	.....	†25,700
Tri-County Gas Co.,* Tulsa	.....	†9,306
S. F. Thompson,* Okemah	.....	2,839
Dr. Joseph C. Taylor,* New York	.....	5,141
Arthur N. Tiffin,* Macomb	.....	2,209
T. F. and Cynthia Talley,* Tishomingo	.....	4,951
Bessie L. Turman	.....	26,584
A. H. Taylor,* Shawnee	.....	2,552
Sarah Leota Travis,* Dover	.....	3,771
H. H. Taylor, Tulsa	.....	52,234
Tawes Royalties Co., Inc.,* Crisfield, Maryland	.....	3,891
A. W. Tawes,* Crisfield, Maryland	.....	5,532
Rufus S. Thomas,* Purcell	.....	38,703
Transcontinental Oil Co., Tulsa	87,547	†121,397
Texas Pacific Coal and Oil Co, Thurber, Texas	38,479	†30,257
Tidal Osage Oil Co., Tulsa	.....	†16,688
Turman Oil Co., Tulsa	5,102	†6,170
Tiger Mountain Oil Co., Tulsa	4,261	5,082
J. Elmer Thomas,* Ft. Worth	.....	5,520

A Modern Compressor for Gasoline Extraction and Oil Field Service



This is an ideal combination of a 200 B.H.P., vertical, three-cylinder, four-cycle CP Gas Engine, directly coupled to a CP vertical, duplex, double-acting compressor, for gasoline extraction, gas boosting and general oil field service. The unit offers the following outstanding advantages:

1—Ease of installation.

2—Small and inexpensive foundation.

3—Small floor space.

4—Smooth operation with minimum of vibration.

5—High overall efficiency, the gas consumption being only 9 cu. ft. per B.H.P. hour at full load.

6—The engine is heavily built and can be converted for Diesel operation where the gas supply becomes inadequate.

7—A large number of compressor cylinder sizes is available for pressures of 25 to 1000 pounds.

8—All engine and compressor cylinders have removable liners.

9—Compressor discharge valves are on the bottom and the cylinders are self-draining.

10—Force feed lubrication for all cylinders and bearings.

11—All engine valve cages are removable. The exhaust valve cages as well as the exhaust manifold, are water cooled.

12—A device is provided for stopping the engine if the lubricating oil supply fails.

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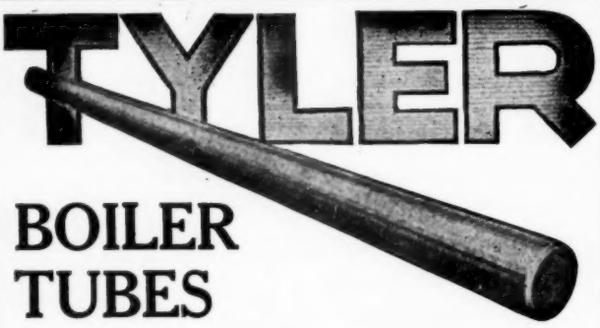

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Resist corrosion—

whether it is charcoal iron tubes for bad water conditions or lap-welded steel tubes for good water conditions—Tyler Boiler Tubes will give *lasting* satisfaction.

All tubes are made to A.S.M.E. Code Requirements.

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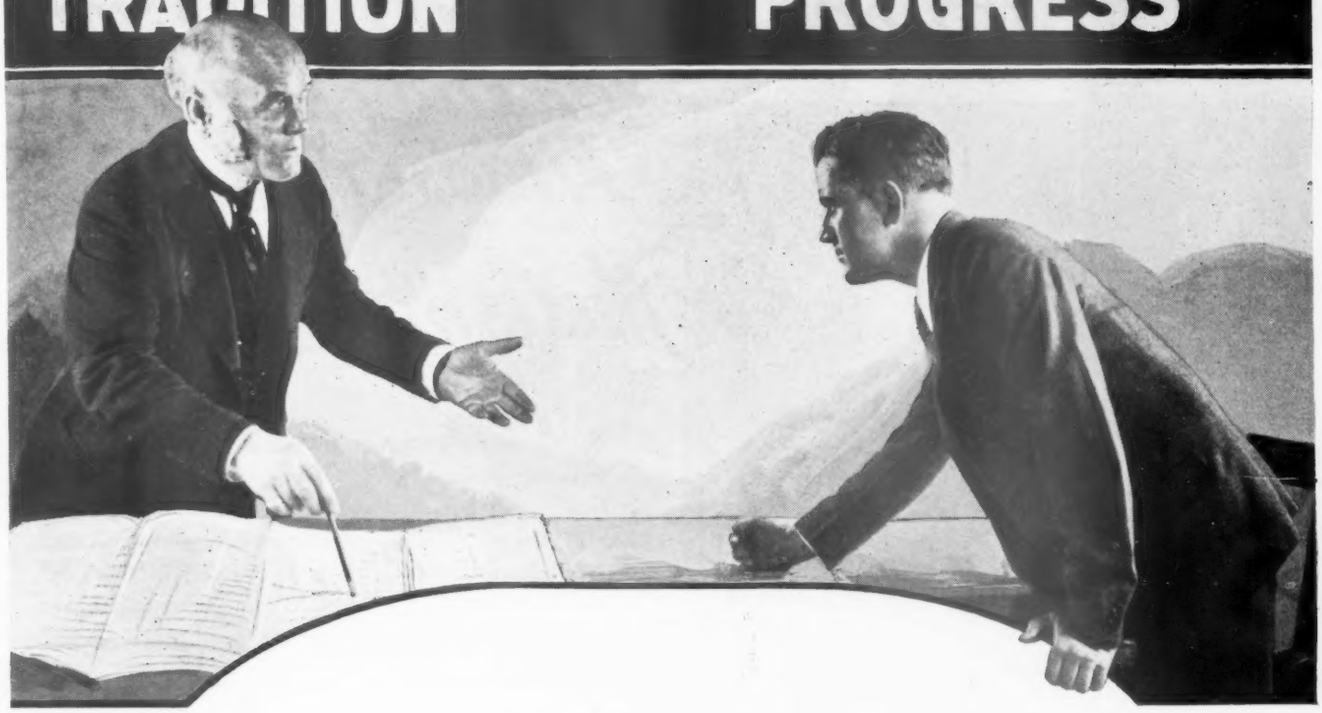
Harrisburg Supply Company, Tulsa, Oklahoma.
Johnson-Peter Company, Brooklyn, N. Y., Pittsburgh, Pa.
A. M. Castle & Co., Chicago, Seattle, Washington, San Francisco, Cal.; Los Angeles, Cal.
The Bourne-Fuller Company, Cleveland, Ohio.
Lukens Steel Company, New Orleans, La.

Name, Address—	Barrels	Amount
M. E. Templeton,* Phoenix, Arizona	.....	10,412
Vida M. Tull,* Yale	15,729	23,318
J. P. Talen,* Maud	.....	3,399
Thlacco Oil Co., Tulsa	9,734	13,902
Tidal Osage Oil Co., Tulsa	361,105	482,377
Twin State Oil Co.,* Tulsa	13,434	21,379
Twin State Oil Co.,* Tulsa	576,092	†610,610
Texas Co. Producing Dept.* Tulsa	1,327,428	†1,868,813
Tidal Oil Co.,* Tulsa	632,414	†822,937
Virgie and Joseph Urbansky,* Oklahoma City	11,001	14,984
U. S. Royalties Corp.,* New York	16,533	†22,754
Gillia Umburn, Weleetka	.....	7,255
W. L. Umburn, Weleetka	.....	16,805
United Eight Oil Co., Ardmore	12,580	16,971
Union Bank and Trust Co.,* Kansas City for G. E. Sullivan	.....	9,433
C. P. Van Graafeiland,* Tulsa	.....	7,028
Valley Osage Oil Co., Tulsa	19,623	22,506
Vennex Oil Co. and Keystone Production Co., Wichita Falls	58,934	76,629
S. E. Vance,* Tulsa	1,736	2,986
Leon G. Voorhees,* Oklahoma City	.....	16,240
Vernon Oil and Gas Co., Blackwell	6,414	10,173
Sam K. Vierson,* Okmulgee	4,268	6,167
Vierson Oil and Gas Co.,* Okmulgee	11,361	15,898
Amanda Vasser,* Tulsa	1,991	3,075
T. F. Villines,* Maud	.....	10,494
W. F. Varnum and Eliza,* Shawnee	.....	15,056
Vaughn and Rush, Dallas	17,090	21,923
E. W. Whitney,* Wewoka	.....	57,211
J. W. Wright estate, Sapulpa	12,078	†16,154
James Wright,* Bristow	.....	3,347
Wellsville Oil Co., Wellsville, New York	9,404	11,154
Frank L. Warren,* Holdenville	.....	2,786
Irvin Wilson,* Wewoka	.....	2,946
S. A. Wilborn,* Sulphur	.....	8,199
L. H. Witmer,* Tulsa	.....	4,142
W. W. Woodworth,* Ringling	2,521	2,450
Winkler and McQueen, Inc., Duncan	.....	13,928
William H. Weir,* Stillwater	.....	3,096
Wood Oil Co., Tulsa	.....	9,834
Wm. L. and Lula E. Wallace,* Shawnee	.....	2,675
H. F. Wilcox Oil and Gas Co., Tulsa	222,219	289,221
H. F. Wilcox Oil and Gas Co.,* Tulsa	.....	226
White Eagle Oil and Refining Co., Wichita	18,622	†26,520
Walsh Oil Co., Tulsa	5,964	6,971
Wittmer Oil and Gas Properties, Pittsburgh	6,037	†9,143
Washington Royalties Co.,* Bartlesville	9,198	12,994
H. Z. Ward,*	3,696	3,685
Mrs. Edith S. Williams,* Little Falls, New York	.....	2,290
Western Paving Co., Oklahoma City	.....	20,292
Westervelt-Noble Oil and Gas Co., Oklahoma City	.....	†14,435
Wood-Gilbert-Wood Syndicate No. 1, Oklahoma City	.....	18,153
Wise and Jackson, Sapulpa	3,874	†4,040
W. S. Wilcox,* Garber	.....	2,146
B. F. Ward, Exec.,* Wilson	3,746	†5,514
Wiser Oil Co., Sisterville, West Virginia	77,282	88,473
Westheimer and Daube, Ardmore	217,367	273,799
Westheimer and Daube,* Ardmore	15,722	17,687
Carrie B. Walsh,* Blackwell	.....	2,334
J. L. Welsh,* Blackwell	.....	2,444
Watchorn Oil and Gas Co., Oklahoma City	11,384	14,685
Western States Royalty Co.,* Great Falls, Montana	.....	7,174
W. E. Woods,* Lindsay	2,309	2,832
W. K. Work,* Wewoka	.....	3,551
P. Work,* Wewoka	.....	3,551
Warner-Caldwell Oil Co., Titusville, Pennsylvania	21,900	25,132
Westerly Oil Co., Bartlesville	4,559	†6,101
Western Okla. Gas Co., Fort Smith, Arkansas	.....	†17,805
Roy Wood,* Oklahoma City	.....	7,001
Weimer and Uri,* Okmulgee	.....	2,932
Sophie Weber,* Marshall	.....	2,651
Morris Weil,* Oklahoma City	.....	2,003
John W. Willmott,* San Diego	.....	41,807
Benton Wilson,* Greenfield, Missouri	.....	4,506
T. A. Walker,* Oklahoma City	.....	29,381
C. C. Walker,* Okemah	.....	5,393
Margaret S. Weeks, Ardmore	.....	†7,178
Margaret S. Weeks, Ardmore	6,631	7,283
Westland Oil Corp., Tulsa	32,147	†48,045
L. H. Wentz (Oil Division), Ponca City	145,348	†214,994
Ward Oil and Gas Co., Tulsa	10,125	12,117
Winona Oil Co. of Delaware, Tulsa	34,085	†48,439
Whitehill Oil Corp., Tulsa	7,547	8,937
Whitehill Oil Corp. (Partners)	5,594	6,660
Whitehill Oil Corp.*	2,296	3,072
Wolverine Petroleum Corp., St. Louis	170,393	200,137
Wolverine Petroleum Corp., St. Louis	.....	†17,129
Harriett E. Youts,* Shawnee	.....	65,016
C. A. Youts,* Shawnee	.....	27,727
L. S. Youngblood, Trustee, or Annie Gahagen,* Wewoka	.....	10,702
York Petroleum Co.,* Muskogee	2,797	4,388
L. W. Young,* Oklahoma City	.....	19,663
Zola Oil Co., Tulsa	13,676	15,251
L. W. Zimmerman, Los Angeles, California	.....	24,221
TOTALS	47,389,982	73,407,932

TRADITION PROGRESS



"Here, Lad—

I'd like to give the job of building the new 10" pipe line to the contractor who was just in here. But he wants to do it by arc welding. I told him I was strong for his old methods and hated to unbend for this newfangled method which might not make the grade."

"Easy, Pop—

It makes the grade **on high.** SPEED and STRENGTH is the middle and last name for an arc-welded line—'Stable Arc' being the **first.**

And further it's miles ahead of a newfangled idea— about 2,500 miles ahead.

. . . . That's the amount of pipe lines that have been constructed or are under way.

Arc welding has literally taken the industry by storm—and this storm has served to unbend every man—unless held erect by stiff bosom shirts or boils."

The Lincoln "Stable-Arc" Welder

—welds easier
—makes better welds
—permits greater output

because of the steady uniform arc throughout entire welding range, which is the result of:

Variable voltage design
Laminated magnetic circuit
Separately-excited generator field
Double control of welding heat
All steel construction

No other welder has all these features.

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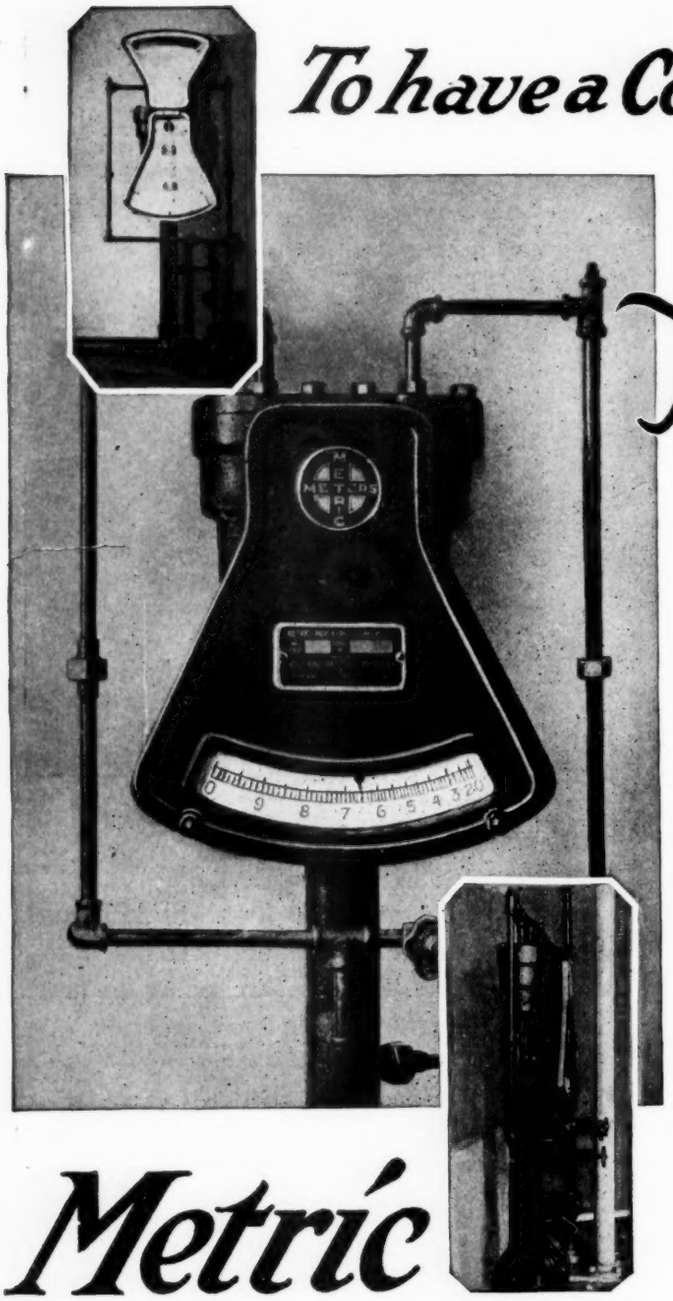
"Stable Arc" LINCOLN WELDER



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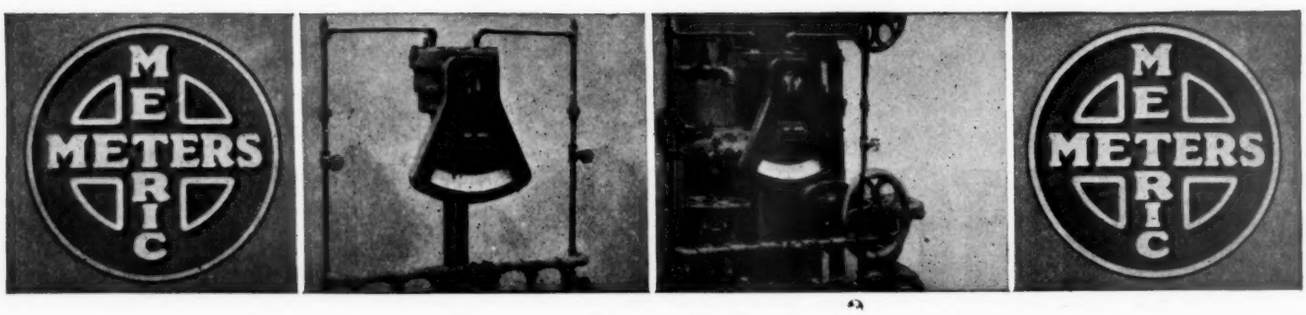

Straight Hole Practice

(*Continued from page 22*)

without the aid of any guides. Without the reamer the holes would show a deviation from vertical of from three to nine degrees for the entire hole while those using the guides were only one to 2½ degrees from vertical. Of the wells drilled recently, of which we have records of those which have stayed within a maximum of five degrees from vertical the larger majority have been drilled at least part way down with guides of some description. Some of the contractors have worked out special equipment for centering their bits. One of these, a triple three point roller bearing straight hole guide has been developed that works within three feet of the bit in starting the hole. The rollers in the guide are smooth and have no reaming action, in fact they exert a rolling effect against the walls which has a tendency to smooth up and keep well mudded the sides of the hole, thus helping to prevent caves. After surface casing has been set, this guide is moved to a point 15 feet above the bit and is left at this location during almost the entire drilling of the well. In soft formation where there might be a boulder projecting part way into the well and the bit might have a tendency to crowd out a little, while passing the boulder this guide would help to bring the bit back into vertical position. Twenty feet above this guide a double three-point reamer with cutting edges is used, and when this reamer comes in contact with any projection it will have a tendency to cut any irregularity of the hole off, thereby straightening out the hole. This double three-point reamer has directly above it a 30-foot joint of six-inch with a joint of eight-inch welded over same, this being termed a "lace joint," and directly above this lace joint is another double three-point reamer with cutting edges. Experience in using these guides and reamers has resulted in very straight holes.

A number of contractors said they used a reamer for the first 2500 to 3000 feet and found that if the hole was straight to this point there was not much danger if reasonable care was used of the hole not going straight the rest of the way.

We have already spoken of the opinion expressed by the contractor that a longer and stiffer drill collar would be of material aid in keeping the bit centered on a vertical axis. One contractor, in particular, who had been using the regular 10-foot drill collar, 7¾-inch in diameter had a special drill collar made, 28 feet long and 9½ inches in diameter and weighing 200 pounds to the foot. He is using this in drilling 11-inch hole and reports very favorable results over the lighter and shorter drill collar. The 9½-inch diameter with the extra length would prevent, theoretically if the walls of the hole were firm and regular, the axis of the bit from getting very far away from the axis of the 11-inch bore. Enough clearance is left, however, to wash over the drill collar with 10-inch wash pipe. In making these longer drill collars it was suggested that they be made in sections of 10 feet instead of 20 feet to 30 feet lengths with the idea that the shorter sections are not so apt to kink. The use of these heavier drill collars should eliminate the kinking of the bottom joint which in the past has caused considerable trouble.

As to the advisability of increasing the wall thickness of the six-inch drill pipe, the general feeling was that the range of weights now manufactured, which runs from 22 pounds to 30 pounds to the foot, was adequate for present purposes. Twenty-five pounds to the foot is commonly used in the Mid-Continent at the present time and this weight seemed to meet with general approval. It was conceded that a thicker walled pipe would give greater rigidity but there was the fear that a heavier wall would crystallize more rapidly under flexing and in addition to this it was considered doubtful whether a slight increase in the rigidity of the drill stem, when its extreme length was taken into consideration, would have much effect on the course of the bit.

Almost every contractor who responded to the questionnaire thought that the weight indicators in present use were accurate enough for their purpose, provided reasonable care was taken of the equipment. On the other hand, not one of the oil companies' engineers who have attempted to check these instruments would agree to this opinion. They claimed that the weight recording instruments in present use were not only inaccurate, difficult to calibrate and calculate, but that they failed in any case to determine the weight actually being exerted upon the bit. Because of not being able to ascertain this actual weight accurately was, they felt, partly the answer to the wide variation in weights different contractors were carrying and for the different results obtained when the weight conditions were thought to be identical. It is interesting to know that in the Mid-Continent at this time a weight indicator is being developed that appears to have most interesting possibilities.

Without exception the contractors put themselves on record as believing that the use of some form of weight indicator was essential in determining the proper relative weights to carry on the bit.

Opinion as to the value in the use of tool joints between each joint of drill stem was fairly evenly divided. A number of those that favored this practice did so from the angle of preventing the bending of the 30-foot joints that are now in use and in eliminating the use of the "Greyhound" single, thus increasing the ease and speed of adding drill pipe to the string while drilling. From the straight hole standpoint many could not see much value in this use of the tool joint as the A. P. I. coupling has the same external diameter as does the standard tool joint. It was thought that any additional rigidity in the drill stem which would help materially in drilling a straight hole should be located in the first 200 feet from the bottom.

The drilling of straight holes will have a material effect on increasing the life of drill pipe but little effect, if any, on the rest of the equipment, according to answers to this question. Straight holes will not only cut down the early fatiguing of pipe due to the severe flexing it receives in crooked holes but will reduce the abrasive wear the pipe receives from the side of the walls which of course is at its worst in crooked holes.

The use of casing protectors in straight hole practice, which seems to be well thought of in California, does not meet with the approval of the Mid-Continent contractors. This is probably due to a difference in casing programs as much of the California rotary drilling is done through casing while in the Mid-Continent, most of the rotary drilling has been done in open hole.

The relation between the diameter of the drill stem and the diameter of the drilled hole was considered of considerable importance by the majority of the contractors. An average of the recommendations as to the proper ratio of diameters is shown below:

6⅝-inch drill stem—11 to 12-inch bore
4-inch drill stem—8 to 10-inch bore
3-inch drill stem—6-inch bore.
2½-inch drill stem—5-inch bore.

For any bore over 14-inch, eight-inch drill stem, such as is being used to some extent in the deeper fields, was suggested.

The choice in boiler sizes and pressures lay between the 100 horsepower boiler carrying a steam pressure of from 200 to 225 pounds to the square inch and the 125 horsepower boiler carrying 250 pounds to the square inch.

The higher steam pressures (225-250 pounds to the square inch) were not actually required for drilling, was the claim, but saved considerable time in coming out of the hole aside from being more efficient and economical than the lower pressures. A good many expressed the opinion that the horsepower that the boiler or the steam pressures carried had little or no effect on the straightness of the drilled hole. There were a few that favored the 75-horsepower boiler and claimed that it could be handled much more easily in the field and that if properly insulated would give as much steam and a higher efficiency than the 125 horsepower boiler.

The statement was made that the boiler ratings as used in the oil country and

XUM

approved by the A. P. I. is in error and that the so-called 75-horsepower boiler will have an actual steam output of within eight to 10 per cent. of the larger rated boiler.

Commencing Drilling Operations

Judging from the answers to the question concerning methods of starting and keeping the drill straight during spudding operations, the contractors have given this problem considerable thought and have worked out some very simple and ingenious methods of insuring a straight start. In the main these methods consist of ways and means of leveling and centering the rotary table and maintaining the vertical alignment of the grief stem until there is sufficient weight of drill pipe below the rotary table to counteract the weight above.

The following method of spudding in a well is sort of a composite description of the procedure followed by many of the contractors. The draw works are set so that the drive from the line shaft to the rotary drive sprocket will cause the center hole in the rotary table to be directly in the center of the derrick. The rotary table is leveled with a spirit level. After the lines are strung through the traveling block, line up the center of the spring hook with the center of opening in rotary table with a plumb bob by moving crown block and sheaves on the top of the derrick. When ready to make hole the grief stem is held in a vertical position, in most cases, by one of several systems of bridles or guides and the alignment checked every two feet with a level. The wire line from the crown block to the traveling block is kept as tight as possible and the table rotated at a good rate of speed. When setting the surface casing if the diameter of the drilled hole is three or four inches greater than the outside diameter of the casing it will permit the straightening of the surface string to some extent, even if the bore is slightly off vertical. The importance of making sure that the surface casing is set absolutely vertical when attempting to drill a straight hole was strongly emphasized by all the answers to this inquiry.

Costs and Speeds

In answer to the question as to whether or not the drilling of a straight hole takes a longer time than when no attention is paid to the straightness of the hole the natural answer at first would be to say, of course it does. That was the answer of the majority of the contractors and it is undoubtedly true that in the first attempts to drill straighter rotary holes it took longer to complete a hole than formerly. However as the methods of procedure became more clearly defined and a lot of the time that had been lost due to the experimentation which is always the case when established methods are changed, the drilling time of straight holes began to lessen. Many of the contractors who have drilled a comparatively large number of straight holes mentioned this fact in their answers and were of the opinion that as our technique progressed we would be drilling straight holes in an average time that would compare very favorably with any former average speeds.

At the end of the discussion on this question a table is given of wells drilled in the various areas of the Greater Seminole, both before and after the straightness of the bore became important. This table includes only a few wells but is representative of the results of those contractors who have had considerable experience working on the straight hole problem.

As to the costs of drilling a straight hole, the general opinion was that the cost was more. As to how much, opinion varied from "just a little more," to 50 cents to $1.00 per foot extra. Several voiced the opinion that the actual cost might not average more in the long run but that in asking the contractor to plug back at his own expense if the hole got too crooked the oil companies were increasing the contractor's risk and that he should have extra compensation to cover the added hazard.

Plugging Back

As to just how many companies are asking this plugging back requirement of their contractors, and what percentage of the holes that will have to be plugged back, or as to how successful this method is in straightening the holes, we have not sufficient information to draw any conclusions.

From the data obtained from the questionaire as to the drilling time and the number of cutters used in drilling straight holes it would seem that it is costing the contractors more money than it did under former practice. As time goes on and knowledge of how to drill straight holes becomes more definite and accurate it does not seem so certain that straight hole drilling is going to increase the contractors drilling costs. From information on hand from the more recent wells, as we have mentioned before, the footage per day and the number of cutters used to the well is coming very closely to the former averages. There should be a saving to the contractor due to the increased life of the drill stem and the lessening of the wear and strain on his drilling machinery, resulting from the decrease in the power required to rotate the drill pipe under these weight modifications and where he pays for the power, a saving in fuel costs.

As to the increase in the number of cutters now being used the majority of replies indicated an increase of from five to 30 per cent. more cutters per well. In contrast to this several contractors reported that on the average it took no more cutters to drill a straight hole than it did before. One contractor's record for his last three holes, which were drilled with rock bits from the top to the bottom, showed an average of 15 per cent. less cutters used than on his previous wells.

These men claimed that with a proper combination of weight on the bit, speed of rotation, length and stiffness of drill collars and in some cases the use of smooth face reamers as guides, they were able to so improve the cutting action of their bits that they actually made more footage per set of cutters than formerly when excessive weight ruined cutters and bushings long before their normal cutting life had expired.

The response on the question as to whether the contractor should be held responsible for plugging back at his own expense, the holes which the companies considered too crooked, was about evenly divided.

There were those who felt that the present price per foot did not justify any increased responsibility on the contractor's part while others said that it depended on the area in which the well was located and more particularly if the well was a wildcat or located in a proven area. It was felt that the problem of drilling a straight hole was far less difficult in an area where the formations that would be encountered by the drill were already known. Also as to what number of degrees of variation from the vertical constituted a crooked hole in the opinion of the oil companies would make a considerable difference in the contractor's viewpoint on this matter.

The opinion was expressed that the straight hole problem was still in an experimental stage and that it was not fair to ask the contractor to carry all the burden. Co-operation between the company and contractor would produce better results than a penalty clause was the opinion of many. Others that were of this same belief made the point that as time went on they thought a penalty clause might be justifiable but that at this stage it should be applied only in well proven areas and that the contractor should receive more money per foot if asked to guarantee the drilling of a straight hole.

TABLE NO. 1

Well No.	Rotary Depth	Drlg. Days	No. Sets of Cones Used	Ft. Per Set of Cones	Cost Per Ft. For Cones	Total Vertical Correct.
A	3,785	37	37	102.3	$1.12	2.4 ft
B	3,792	32	43	88.2	1.28	1.42 "
C	4,609	41	46	100.2	1.13	3.8 "
D	4,090	33	47	87.0	1.30	8.0 "
E	4,085	33	46	86.9	1.28	7.0 "
Av.	4,072	35	44.74	92.92	1.19	4.52 "
F	3,928	30	41	95.8	1.22	185.0 "
G	3,885	34	45	86.4	1.31	196.4 "
H	3,773	26	31	102.5	1.11	34.34 "
I	4,014	39	43	93.4	1.21	147.6 "
Av.	3,900	32	40	94.5	1.21	140.8 "

Wells No. A to E were drilled from top to bottom with rock bits.

Wells No. F to I were average wells for their area and not extreme cases of crooked holes.

The limits in degrees of variation from vertical within which the oil companies are warranted in asking the contractor to stay at the present time depend for the most part on the district in which the well is located, judging from the answers received. From five to 30 degrees for the maximum allowable angle was suggested. Those contractors who have had the most experience and the best success drilling straight holes in the Greater Seminole area suggested a maximum allowable angular deflection from vertical for proven areas of from five to 10 degrees, and for wildcats, from 10 to 15 degrees.

Several oil companies are writing a maximum angle from the vertical limit in their contracts along with a penalty clause which requires the contractor to

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plug back at his own expense should the well go beyond the stipulated number of degrees.

Manual Versus Automatic Control

In considering the merits of the automatic type of drilling control for drilling straight holes compared with those of the manual type of control, from the answers to this question, there is a strong feeling that the automatic control will, (when one is ultimately developed that really controls the amount of weight carried on the bit) afford proper solution to this weight control problem. As in many other types of machine feed control, it is not humanly possible for any man to control the feed of a machine over a period of from eight to 12 hours as carefully and consistently as can an automatic control. A large number of the answers were to the affect that the present types of automatic control are not considered satisfactory; in fact many went so far as to say they much preferred the manual control in the drilling of a straight hole. Well represented however was the group that believed that even at the present time the automatic control, more particularly the electric control, had distinct advantage over the hand feed in this matter of straight hole drilling. The rest of the contractors were undecided and preferred to reserve their opinion until more comparative data was available.

A well known Mid-Continent engineer is working on a very simple attachment that can be used on any of the existing types of automatic control which, if it will do what its designer hopes, will control the actual amount of weight carried on the bit.

No type of power was conceded to have any inherent advantages in the drilling of a straight hole and most of the opinions expressed were frankly founded on the basis of personal preference for one type of power or another. Two or three expressed the opinion that electric power, perhaps due to the possible variations in steam power, was best adapted for the drilling of straight holes. There was very little information to sustain their ideas and it is hoped that in the discussion of this paper something more definite along this line, will be offered.

The importance of the driller in the drilling of straight holes is outstanding in the unanimity of opinion that upon his competence rests the bulk of the burden. Even in the case of the automatic control his experience, judgment and manual dexterity is considered of fundamental importance.

Of almost equal certainty was the opinion that the driller, regardless of the type of control used or his ability, can not tell when the hole first starts to be crooked. After the hole has actually become crooked the experienced driller can sometimes tell by various indications that he is no longer drilling a straight hole. The accuracy with which he can determine this depends largely on the depth of the hole, the character of the formation, the extent of the crook, and the watchfulness and ability of the driller.

This last question probably should have been left to the geologists to answer as it is difficult for a contractor to ascertain much reliable information as to the lithology of the different formations encountered, and even more difficult for him to correlate any data he may obtain over the large areas that he operates. Therefore these structural questions were answered in a very practical way and for the most part they applied only to one or at the most several wells in different areas where a contractor or contractors have had difficulties on particular holes.

The formations that seemed to have caused the greatest difficulty in keeping the hole straight, if it were the formations that were responsible, lay between 1900 and 3000 feet according to the majority of the replies. It is, of course, a debatable question whether or not the tendency of the rotary holes to go crooked at these depths in the Greater Seminole area is caused by some variation in the mechanics of the drilling procedure or from some structural condition in the formations encountered.

The accompanying table, No. 2, shows the areas and the depths in the Greater Seminole district that have given the most trouble with crooked holes, as revealed by the acid bottle survey.

Contractors reported that edge wells or wells where there was a decided change in the dip of a hard formation as compared with the general dip of the formation they had been drilling were the most difficult to keep straight. Evidently local breaks or fractures make it very difficult to keep the drill going straight.

With all these factors tending to prevent the drilling of straight holes, it may be interesting to know how much success has been encountered in the effort to straighten rotary holes. To this end Table 3 is offered as a partial record of the results to date.

The general dip of the formations encountered in the Greater Seminole area was not considered by the majority of the contractors to be serious enough to cause any undue trouble in drilling straight holes but local faulting, crossbedding or fractures were held to constitute serious obstacles.

Fishing jobs of all kinds, and particularly side-tracking work, were considered factors that are beyond our present control in preventing a crooked hole. Broken and sharply tilted formations were also listed under the catagory of uncontrollable factors that might cause the hole to deviate from vertical.

Cable tool holes have not been mentioned in this discussion as cable tools have been employed, in the areas included in this paper, to follow up the rotary tools which had drilled the greater part of the hole. Furthermore, from the few holes of which we have a survey for the cable tool portion, the cable tools seem to start off at about the same angle at which rotary tools had stopped. If the rotary hole at this point was quite a little off vertical and the cable tools had as much as several hundred feet to drill, the tendency was for the cable tools to gradually straighten up and drill a straighter hole.

Table No. 2

Vertical Correction Feet	Seminole	Bowlegs	Earlsboro	Searight	Little River	St. Louis	Carr City	Mission	Maud	Miscellaneous	Total	Per Cent.
Under 10	2	1	2	0	0	2	1	2	4	3	17	7.9
10 to 25	1	3	4	0	6	4	2	5	10	1	36	16.7
25 to 50	1	2	3	2	7	1	2	6	6	2	32	14.8
50 to 100	2	5	2	1	10	4	6	4	7	1	42	19.4
100 to 200	2	2	2	0	15	5	4	12	3	7	52	24.0
200 to 300	0	1	2	0	10	1	0	4	1	1	20	9.3
Over 300	1	5	2	1	6	0	0	2	0	0	17	7.9
Total	9	19	17	4	54	17	15	35	31	15	216	100.0

Table No. 3

No particular precautions taken to obtain vertical holes.

Area	No. of Wells	Total Ft. Surveyed	Av. Depth	Total Corr.	Av. Corr.	Max. Corr.	Min. Corr.	Av. Angle	Max. Angle
Seminole	9	37,509	4168	993	110.0	408.3	1.35	13°12′	42°35′
Bowlegs	19	82,241	4328	3277	172.5	592.0	1.0	16°14′	40°30′
Earlsboro	17	69,884	4111	1727	101.6	317.5	1.17	12°46′	35°10′
Searight	4	17,713	4428	512	128.0	382.0	31.0	13°49′	35° 0′
Little River	54	233,535	4325	8594	159.0	781.0	14.0	15°35′	46° 0′
St. Louis	17	70,592	4152	1403	82.5	300.0	2.0	11°26′	30°18′
Carr City	15	63,730	4218	1095	73.0	185.0	4.4	10°41′	25°45′
Mission	35	151,418	4326	3878	110.8	320.0	0	13° 0′	28°50′
Maud	31	126,852	4092	1568	50.6	295.0	6.0	9° 1′	23° 0′
Scattered	15	56,718	3781	1456	97.0	279.0	0	13° 0′	38°30′
Total	216	910,232	4214	24503	113.4	781.0	0	13°19′	46° 0′

Table No. 4

Summary of wells upon which straight hole practice has been applied.

No. of Wells	Total ft. Surveyed	Av. Depth	Total Corr.	Av. Corr.	Max. Corr.	Min. Corr.	Av. Angle	Max. Angle
58	233,341	4023	1267	21.85	65.92	1.0	5°59′	19°0′

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New Mexico Drilling Will Show "Low Down" This Year

(*Continued from page* 24)

on the Texas & Pacific Railroad. Prior to the completion of the rail spur from Monahans to Wink and Kermit, several months ago, equipment used in the drilling of most of the southern Lea County tests was trucked from Pyote by way of Hendrick field, or completely across Winkler County.

The first direct pipe line connections for Lea County were also provided early in May of this year. The Texas Pipe Line Company completed construction work on a 10-inch line extension from Hendrick field to tank farm and pump station, located in the northeast quarter of Section 5-26s-37e, but pumping of oil through this line will not be started until the company's West Texas trunk line is placed in operation early in June, while in the meantime oil being run for purchase from the Cranfill-Reynolds and Devonian's producer is being stored by the purchaser. Humble Pipe Line Company gave Lea County its second trunk line connection during the first week in May when a 10-mile eight-inch extension line from the Leck-Daugherty pool, Winkler County, was completed to the Skelly Oil Company's flowing well. Humble plans to start work shortly on a network of lines throughout Lea County to take oil from completed wells held by Marland-California Interests, Mid-west

Lea County, New Mexico, Operations

Company, farm and location—	Surface Elevation	Top Salt	Top Lime	Pay Horizon	Total Depth	Remarks
H. W. Andrews et al's Andrews 1, 330 ft from SW cor Sec. 12-20S-36E.						Lcn.
Cecil Bordages et al's Mrs. J. Hughes 1, C S½, 27-19S-38E	3613	1660	3825		4011	S/O&W Prob. Jkd.
Cecil Bordages et al's Bordages 2, 400 ft from NE corner NE¼, Sec. 20-19S-38E						Lcn.
Buell-Hagan et al (was Tilton & Croft's) State 1, C NE¼, Sec. 33-11S-35E	4144 4250				1310	Drl.
J. D. Cook et al's State 1, 660 ft from N and 2310 ft from E lines, Sec. 12, 12-21S-33E						Rig
Cranfill-Reynolds and Magnolia Pet. Co.'s State 1-B, 330 ft NE corner Sec. 3-21S-33E						Rig
Cranfill-Reynolds & Mid-West Ref. Co.'s Meyers-Gov. permit 1, 330 ft from NE corner SE¼, Sec. 22-24S-36E	3084				725	Drl.
Curtis Drl. Co. et al's Stovall-Neal 1, 1650 ft from N and E lines NE¼, Sec. 22-18S-34E	3910 4046				1150	SD
Empire Gas & Fuel Co.'s Closson 1, 1650 ft from E and 2310 ft from S lines SE¼, Sec. 6-22S-36E	3568				690	Drl.
Empire Gas & Fuel Co.'s Martin 1, 2310 ft from N and E lines NE¼, Sec. 28-20S-33E					785	Drl.
Empire Gas & Fuel Co.'s State 2-B, 990 ft from S and 2310 ft from E lines, Sec. 8-21S-35E	3656	1935			2700	Drl.
Flynn-Welch & Yates' State 1, 660 ft from N and 1890 ft from W lines, Sec. 3-21S-33E						Lcn.
Gypsy Oil Co.'s Humphreys 1.-330 ft from NW corner SW¼ Sec. 25-25S-36E.					645	Drl.
Gypsy Oil Co.'s H. T. Mattern 1.-330 ft from SW corner SE¼ Sec. 24-21S-36E	3519	1380	2970 3163	3012-30	3125	Fsh (gas pay)
Henderson-Dexter et al's Jewett-McDonald 1.-330 ft from SE corner Sec. 18-20S-34E	3631	1092	3455	3522-94	3612	PB Acct. Water
W. H. Holmes-Huey et al's State 1-A.-(3rd. hole) C SW¼ Sec. 18-12S-35E.	4131					Lcn.
Humble O & R Co.'s W. D. Grimes 1.-1980 ft from S. & 660 ft from Sec. 30-18S-38E						Lcn.
Humble O&R Co.'s A. F. Stuart 1.-660 ft from N & 660 ft from E lines Sec. 23-25S-36E						Lcn.
Maljamar O. & G. Corp.'s L. R. Simmons 1.-660 ft from NE cor NE¼ Sec. 29-17S-32E.						Lcn. T. A.
Marland Production Co. and The California Co.'s H. A. Flint (Gov. permit) 1.-330 ft from SE corner Sec. 28-20S-34E					585	Drl.
McCallister (Gov. permit) 1.-330 ft from SW corner SE¼ Sec. 24-26S-36E					165	Drl.
Bill Meyer (Gov. permit) 1.-330 ft from SW corner N½ Sec. 28-22S-36E						Rig
A. E. Meyers (Gov. permit)1.-990 ft from SW corner Sec. 17-21S-36E						Rig
E. J. Wells (Gov. permit) 1.-330 ft from SW corner E½NE¼ Sec. 11-25S-36E					55	Drl.
Mid-West Ref. Co.'s Capps 1.-205 ft from SW cor SW¼ Sec. 3-19S-38E	3602				1605	Drl.
Mid-West Ref. Co.'s J. D. Fisher 1.-990 ft from N and 1650 ft from E lines Sec. 5-20S-35E	3690				504	SD & T. A.
Mid-West Ref. Co.'s Gregory 1.-1650 ft from W and 990 ft from S lines SW¼ Sec. 31-25S-37 E.	2988 3760	1110			2670	Fsh.
A. D. Morton et al's State 1.-C NW¼ 3760 Sec. 32-11S-38E	3901				1700	Fsh.
Ohio Oil Co.'s W. H. Price 1.-250 ft from N and 2390 ft from W lines Sec. 7-19S-39E	3603					Rig.
Ohio Oil Co.'s State 1.-990 ft from S and 2310 ft from W lines SW¼ Sec. 9-19S-38E	3591					Rig.
Prairie O. & G. Co.'s Slattery (Gov. permit) 1.-330 ft from NE corner NE¼ Sec. 22-22S-34E						Lcn. T. A.
Pueblo Oil Co.'s Will Scott (Gov. permit) 1.-660 ft from S and 1980 ft from E lines Sec. 29-25S-37E	3003	1200	2465		2915	Drl.
Rector Oil Co.'s King (Gov. permit) 1.-990 ft from N and 330 ft from E. lines Sec. 26-25S-32E						Rig
Reynolds Drilling Co.'s State 1.-330 ft from SE corner NW¼ Sec. 14-22S-34E						Lcn.
Shell Pet. Corp.'s O. B. Terry 1.-1650 ft from E and 2310 ft from N lines Sec. 22-19S-38E					645	Drl.
Texas Pacific Coal & Oil Co.'s State 2.-330 ft from NW cor SW¼ Sec. 21-23S-36E						Rig
The Texas Co.-Amerada & Columbian Carbon Co.'s Humphreys (Gov. permit) 1.-330 ft from NE corner SW¼ Sec. 18-20S-32E	3459 3465	945			1750	Drl.
Moberly (Gov. permit) 1.-330 ft from SW corner NE¼ SE¼ Sec. 17-26S-37E	2963	1212	2870		3541	Prob. junked
Anna C. Moore (Gov. permit) 1.-330 ft from NW corner SE¼ Sec. 24-20S-32E	3550					Rig Temp. Abn.
Sheppard (Gov. permit) 1.-330 ft from SE corner SE¼ NE¼ Sec. 6-26S-37E	2970	1130	2643	3206-3223	3223	Drl. by junk
Vacuum Oil Co. et al's State 1.-330 ft from SW corner NW¼ Sec. 13-17S-34E	4044	1762	4330	4466-4568	4568	Drl. 1100 Ft. OIH Lcn.
E. C. Winters et al's Mrs. W. A. Stansell 1.-C NE¼ Sec. 17-15S-35E						

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Refining Company and others, with tentative plans to go also to the new Getty pool in Eddy County.

Three or possibly four additional trunk line connections are assured for Lea County as soon as oil production justifies the extension from the Winkler County area. Shell Pipe Line Company plans to invade the county with a line in the event commercial production is developed from the drilling test and others scheduled by the Shell Petroleum Corporation, while both Magnolia Pipe Line Company and Atlantic Oil Producing Company are awaiting an opportunity to obtain sufficient connections to justify an extension line. Should the Gypsy Oil Company score flush production from tests now underway, and those planned for early drilling, Gulf Pipe Line Company would be called upon to take the oil by extending a line from Winkler County.

The prospect of tank concerns reaping a harvest in Lea County is not very bright with so many trunk lines awaiting an excuse to invade the county. The Texas Pipe Line Company has erected two 55,000-barrel steel tanks on its Jal station site in Section 5-26s-37e, and is also erecting a 37,500-barrel steel tank to

Lea County, New Mexico, Oil Producers

Company, farm and location—	Surface Elevation	Top Salt	Top Lime	Pay Horizon	Total Depth	Date Comp.	Initial Prod.
Cranfill-Reynolds & Devonian Oil Co.'s Wilson 1.-330 ft from N and 1650 ft from E. lines Sec. 23-25S-36E	3073 3084	1135	3017	3350-3400	3426	4-20-29	P.250
Empire Gas & Fuel Co.'s State 1-B.-330 ft from NE corner NW¼ Sec. 8-21S-35E	3640	1865	3255 3780	3826-3835	3835	9-11-28	P.85
Maljamar Oil & Gas Corp.'s Baish-Gov. permit 1.-330 ft from NE corner Sec. 21-17S-32E	4000 3988	950	2515 3590	3920-4124	4140	7-16-26	100Bbl. & 10 Mil. gas.
Beardsley 2.-330 ft from E and 1650 ft from N lines Sec. 15-17S-32E	4054	1172	2765	3880-3895	4335	6-6-28	P.10
Mitchell (Gov. permit) 1.-330 ft from cor Sec. 5-17S-32E	4046 4055	945	3525	3715-3790 4095-4111	4230	4-29-27	100 Bbl.
State 1.-330 ft from SE corner Sec. 16-17E-32E	4002	945	3545	3600-3610	4115	4-29-27	100 Bbl.
Marland Prod. Co. & The California Co.'s Lockhart (Gov. permit No. 13) 1.-330 ft from NE corner NW¼ NW¼ Sec. 31-21S-36E	3628	1785	3330	3805-3990	3990	3-14-29	275 Bbl.
Mid-West Ref. Co.'s State 1.-330 ft from NE corner Sec. 9-19S-38E	3707	1625		4050-4195	4245	11-8-28	950 Bbl.
Skelly Oil Co.'s Joyner (Gov. permit) 1.-330 ft from NE corner SE¼ Sec. 26-25S-36E	3029	1125	2992	3248-3331	3341	1-30-29	1,000 Bbl.
The Texas Co.—Amerada & Columbian Carbon's B. Lynch (Gov. permit) 1.-330 ft from NW corner SE¼ Sec. 34-20S-34E	3749	1760	3340	3722-3731	3731	3-31-29	1,200 Bbl.
W. H. Rhodes (Gov. permit) 1.-990 ft from N and 2310 ft from W lines Sec. 22-26S-37E	2988	1140	3010	3040-3213	3213	10-31-27	120 Bbl. & 23 Mil. gas
Sheppard (Gov. permit) 1.-330 ft from SE corner SE¼ NE¼ Sec. 6-26S-37E	2970	1130	2643	3206-3223	3223	1-15-29	165 Bbl.

Lea County, New Mexico, Gas Wells

Company, farm and location—	Elevation Surface	Salt Top	Lime Top	Horizon Pay	Depth Total	Comp. Date	Prod. Initial
Gypsy Oil Co.'s State 1.-330 ft from SW corner SW¼ Sec. 34-21S-36E	3562	1625	3071	3218-3543	3951	12-17-28	20 Mil.
Marland Prod. Co. & The California Co.'s J. S. Eaves (Gov. permit No. 1) 1.-330 ft from SW corner SE¼ Sec. 19-26S-37E	2960	1173	2610	2908-3002	3002	12-30-28	42 Mil.
Lynn (Gov. permit No. 7) 1.-330 ft from NW corner SE¼ Sec. 26-23S-36E	3344	1450	2790	3007-3650	3930	3-8-29	25 Mil.
S. Meyer (Gov. permit No. 11) 1.-330 ft from SW corner NW¼ Sec. 26-20S-37E	3508	1365	2795 3600	3540-3838	3915	3-5-29	1½ Mil.
M. F. Sholes (Gov. permit No. 2) 1.-300 ft from NW corner SW¼ Sec. 19-25S-37E	3067	1170	2535 2584	2550-3030	3030	1-16-29	43 Mil.
Mid-West Ref. Co.'s C. Farnsworth (Gov. permit) 1.-990 ft from N and 330 ft from W lines Sec. 13-26S-36E	2949	1135	2710	2915-3127	3127	4-2-29	40 Mil.
The Texas Co.-Amerada-Columbian Carbon Co.'s Cagle (Gov. permit) 1.-330 ft from SW corner NE¼ SW¼ Sec. 9-26S-37E	2961	1000 1110	2648	2836-3472	3472	1-8-29	80 Mil.
Texas Pacific Coal & Oil Co.'s State 1.-330 ft from SE corner SW¼ Sec. 22-23S-36E	3407	1570	2945	3118-3945	3995	5-20-29	15 Mil.

Lea County, New Mexico, Failures

Company, farm and location—	Surface Elevation	Top Salt	Top Lime	Depth	Completed	Remarks
Cecil Bordages et al's Mrs. J. Hughes 1.-C S½ Sec. 27-19S-38E	3613	1660		4011	2-15-29	Junked
Caprock O. & G. Co.'s Levers-State 1.-330 ft from NW corner SE¼ SW¼ Sec. 11-16S-32E	4307 4225	1011		4915	8-29-27	(W. S. 4850-4915 ft.)
Covert et al's State 1.-250 ft from NW cor NW¼ Sec. 15-21S-33E	3860	1190	3860	4434	8-10-27	(W. S. 4430-4434 ft.)
Cranfill-Reynolds & Magnolia Pet. Co.'s State 1.-330 ft from NE corner SE¼ SE¼ Sec. 23-26S-36E	2918	1835	3083	3500	12-11-28	(W. S. 3465-3500 ft.)
Empire Gas & Fuel Co.'s State 1-C, 330 ft from SW cor SW¼ NW¼ Sec. 12-21S-34E	3714	1830	3535 4163	4194	3-13-29	(W. S. 3860-4194 ft.)
The Exploration Co. of Texas' H. S. Record Fee 1.-C NE¼ Sec. 25-19S-35E	3690	1775	4005	4554	7-10-28	(W. S. 4424-4554 ft.)
Henderson-Dexter & Texas Prod. Co.'s Wyatt (Gov. permit) 1.-330 ft from SW cor SW¼ Sec. 34-17S-33E	4052	1580		5367	1-20-28	
W. H. Holmes-Huey et al's State 1.-(2nd. hole) C SW¼ Sec. 18-12S-35E	4131 4257			1900	12-19-27	Junked
Infield-Bridges et al's State 1.-330 ft from SE corner SE¼ Sec. 4-17S-34E	4095	1806		5329	12-2-27	(W. S. 5204-5329 ft.)
Maljamar O. & G. Corp.'s Pearsall 3.-C NE¼ NE¼ Sec. 33-17S-32E	3944	1092	3660	4339	2-20-29	(W. S. 4308-4339 ft.)
Marland Production Co.'s Brooks (Gov. permit No. 9) 1.-330 ft from NW corner SW¼ Sec. 8-20S-33E	3535	1130 1735	2840 2915	4003	1-28-29	(W. S. 3210-3512 ft.)
Danciger (Gov. permit No. 6) 1.-330 ft from SW corner Sec. 7-23S-32E	3470	1720 2010	3550 3575	4040	11-28-28	(W. S. 3844-3861 ft.)
King (Gov. permit No. 8) 1.-330 ft from NE corner NE¼ Sec. 26-25S-32E	3421	1062		4325	11-25-28	(Salt)
J. L. Reed (Gov. permit No. 10) 1.-330 ft from NE corner SW¼ Sec. 22-20S-36E	3598	1645	3150 4254	4420	3-15-29	(W. S. 4410-4420 ft.)
W. L. Roberts (Gov. permit No. 4) 1.-330 ft from SW corner Sec. 20-23S-36E	3410	1655 1775	3842	3949	6-6-28	(W. S. 3895-3905 ft.)
Siedeman (Gov. permit No. 3) 1.-300 ft from SW corner SW¼ Sec. 4-25S-36E	3190	1590 1470	3495	4125	6-7-28	(W. S. 4120-4125 ft.)
Marland Prod. Co. & The California Co.'s Slattery (Gov. permit No. 14) 1.-330 ft from SW corner NE¼ Sec. 7-22S-34E	3519	1615 1760	3670 3650	4155	12-11-28	(W. S. 4145-4155 ft.)
Marland Prod. Co. & The California Co.'s Warren (Gov. permit No. 12) 1.-330 ft from SE corner SW¼ Sec. 28-20S-38E	3528	1500	3526 4100	4215	3-12-29	(W. S. 4207-4215 ft.)
Mid-West Ref. Co.'s A. Farnsworth (Gov. permit) 1.-990 ft from S and 330 ft from W lines SW¼ Sec. 12-26S-37E	3013	1065	2794 2900	4110	4-10-29	(W. S. 4045-4110 ft.)
Ohio Oil Co.'s Wm. Mitchell-State 1.-330 ft from NE corner SW¼ Sec. 18-17S-32E	3930	905		4385	4-29-27	(W. S. 4029-4385 ft.)
Rector Oil Co.'s (Hill & Abell) Maetchel (Gov. permit) 1.-330 ft from SW corner Sec. 5-26S-33E	3294	1150	3795	5006	1-19-29	
C. E. Reynolds Drl. Co. et al's Anderson 1.-C SW¼ Sec. 29-13S-37E	3905	2485	4770	5235	12-1-28	
The Texas Production Co.'s Jackson (Gov. permit) 1.-330 ft from SE corner SE¼ Sec. 4-20S-34E	3634	1540	3670	4031	10-2-27	(W. S. 3745-4031 ft.)
The Texas Production Co.'s Lockhart (Gov. permit) 1.-330 ft from S and 400 ft from E lines SE¼ SW¼ Sec. 5-22S-38E	3373	1725	4097	4507	11-28-27	(W. S. 4480-4507 ft.)

XUM

make a production test of The Texas Company-Amerada Petroleum Corporation-Columbian Carbon's big well on the Lynch permit, Section 34-20s-34e, with intentions of laying a line to the well should the output hold up in volume over a reasonable period.

Mid-west Refining Company brought the first large tanks into the county, having two 55,000-barrel tanks and a number of 5000-barrel containers at its Hobbs district producer in Section 9-19s-38e. A pipe line connection for this area is almost certain to be made available before more tankage is necessary. The above small tanks have been filled, while the lone producer is delivering oil into the second 55,000-barrel tank.

The towns of Jal, Hobbs, Carlsbad and Artesia are the principal field headquarters of the Lea County operators, while some of the companies are handling this activity from Wink, Kermit and Midland, Texas. Field representatives of some of the larger operators and their addresses are given below: Harold Vance, superintendent for Marland Production Company-The California Company, Jal; M. J. Head, superintendent for The Texas Company, P. O. Box No. 548, Carlsbad; M. E. Baish, superintendent for Maljamar Oil & Gas Company, Artesia; Bob Price, superintendent Gypsy Oil Company, Carlsbad; Dan Bodie, superintendent Empire Gas & Fuel Company, Carlsbad; Rae Sindorf, drilling superintendent Eastland Oil Company, Midland; and E. L. Davenport, superintendent of drilling for Shell Petroleum

Production and Utilization of Natural Gas

(*Continued from page 27*)

NATURAL GAS PRODUCTION UTILIZATION AND WASTAGE IN CALIFORNIA
Summary Years 1920—1928 Inclusive

Year	Total Field Production MCF	Total Utilization MCF	Total Wastage MCF
1920	68,650,000	62,630,000	6,020,000
1921	82,000,000	72,000,000	10,000,000
1922	120,600,000	94,000,000	26,600,000
1923	319,262,352	129,148,352	190,114,000
1924	248,519,406	121,097,406	127,422,000
1925	236,646,717	145,152,717	91,494,000
1926	274,364,773	189,084,773	85,280,000
1927	293,435,459	219,250,459	74,185,000
1928	316,830,147	239,239,423	77,590,724
TOTAL	1,960,308,854	1,271,603,130	688,705,724
Percentages	100%	65%	35%

During December, 1928, the monthly production utilization and wastage of natural gas in California may be segregated as follows:

TOTAL FIELD PRODUCTION		33,413,326 MCF
Repressing Storage	330,743 MCF	
Gasoline Plant Fuel and Shrinkage	5,134,575	
Lease Fuel	6,546,441	
Refining Fuel	972,365 MFC	
Sales and Distributing Utilities	10,619,920	
Loss and Wastage	9,809,282	
TOTALS	33,413,326 MCF	33,413,326 MCF

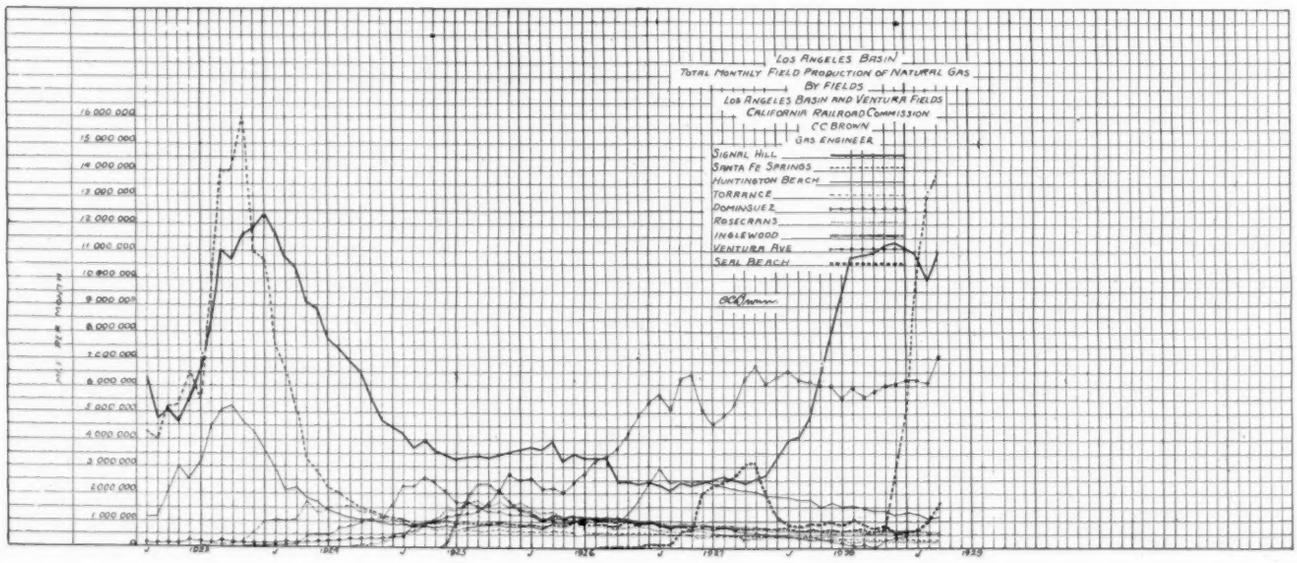
ed in so that at the present time the total natural gas production thus curtailed or pinched in, amounts to 145,000,000 cubic feet per day, or 14.5 per cent. of the total daily production of the state. Further curtailment is anticipated.

The second method of conserving natural gas that has received attention is the injection, or pumping back underground, of surplus gas during periods of surplus gas supply. The results accomplished by this injection are the physical storage of gas that would otherwise be lost and the re-pressuring of oil sands from which the original gas had been drawn, with the consequent increased oil production from such sands.

It is not feasible to thus re-pressure all fields, due to the fact that in some cases the mechanical condition of the wells will not permit it and the underground structures are not always tight. However, in California we are fortunate in having a number of fields in which injection is not only feasible, but advantageous. In some cases, the injected gas comes from other fields and in other cases the surplus gas from one deep zone in a field is pumped into the depleted shallower zones in the same field.

During the past year there has been as much as fifty million cubic feet of surplus gas per day thus injected and the total amount of gas thus pumped back underground to date amounts to eight and on quarter billion cubic feet.

The value of natural gas both to the commonwealth in which it is produced, and to the oil industry which produces it, is becoming more and more widely known and appreciated. The growth of the natural gas industry from practically nothing in 1865 to one with a $1,600,000,000.00 capital investment in 1927 bears out this statement.



COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
Bolsa Chica Oil Co., Mutual 4	50	6854
Deeds, Carl 4	700	6375
Hoyt, Otis 2	3500	7057
Rio-Grande Oil Co., Municipal B11	350	6155
MIDWAY—		
Republic Pet. Corp. 34	1500	3300
MT. POSO—		
Petroleum Securities Corp., Glide 14	*	1820
RINCON—		
General Pet. Corp., Hobson A3	75	6651
SANTA BARBARA—		
Olympic Oil & Ref. Co., Lomas 1	1200	2434
SANTA FE SPRINGS—		
General Pet. Corp., No. 228	1100	7674
Getty, Geo. F., No. 28	3515	6470
Shell Oil Co., G. H. N. 19	1400	6510
G. H. N. 20	2600	6409
St. Helens Pet. Co., Hill 1	8000	6350
The Texas Co., Foix 4	7800	6790
Standlee 4	12,000	6830
SEAL BEACH—		
Associated Oil Co., Bryant 2	834	4980
Hellman 2	1212	5515
VENTURA—		
Associated Oil Co., Hartman 12A	320	6919

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGHENY COUNTY—		
F. P. Martin, Schneider 1	¶1½	....
Swain Bros., Leeper 1	2	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
BOONE COUNTY—		
Clendenen Gas Corp., Boone County Coal 1	¶1	....
Martin Oil Co., Price 2	¶1	....
United Fuel Gas Co., Cole-Crane 2525	¶¼	....
Owens Bottle Machine Co., Peytona 1	¶1¼	....
Miller Land Co., Alderson 3	¶1	....
Cameron Oil & Gas Co., Stone 2	¶½	....
RITCHIE COUNTY—		
First National Bank of St. Marys, Ross Estate 15	dry	....
J. W. McGinnis & Co., United States Oil Co. 6	¶¼	....
Dailey Bros., Ada s. 2	3	....
South Penn Oil Co., Simmons 1	dry	....
CLAY COUNTY—		
Virginian G. & O. Co., Brown Swan & Co. 18	10	....
Reed 2	20	....
United Fuel Gas Co., Brown-Swan & Co. 1859	¶½	....
MARION COUNTY—		
Pittsburg & West Virginia Gas Company, Henning 2391	¶1	....
Carnegie Nat. Gas Co., Henning 1437	2	....
Fluharty 1	¶¼	....
LOGAN COUNTY—		
Trojan Gas Co., Garrett 4 ..	¶1	....
W. G. McCorkle & Co., Garrett 1	¶¼	....
CALHOUN COUNTY—		
Hope Natural Gas Co., Dee Nitz 7285	dry	....
F. F. McIntosh & Co., Slider 3	¶1¼	....
WETZEL COUNTY—		
Chesebrough Mfg. Co., Antill 1	5	....
JACKSON COUNTY—		
Heck Oil Co., Kuhl Estate 4	2	....
TYLER COUNTY—		
Hess & Co., Hess 2	5	....
LINCOLN COUNTY—		
Earl Cameron, Stone 2	¶½	....
DOANE COUNTY—		
United Fuel Gas Co., Hunt 3901	¶1¼	....
WOOD COUNTY—		
Valley Mills Oil & Gas Co., Sudgen 1	¶¼	....
GILMER COUNTY—		
C. W. Bennett & Co., Burton 1	¶1	....
CABELL COUNTY—		
West Virginia Gas Co., Adkins 20	¶½	....
MINGO COUNTY—		
Public Gas Co., Marcum 3	¶2	....
KANAWHA COUNTY—		
Buff Lick Oil & Gas Co., Young 1	*	....
PLEASANTS COUNTY—		
Adam Ward & Co., Varner 1	*	....

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial This Week	Prod. Last Week
Arkansas	7	14	3	1	..	3	4	10	940	20
California	18	17	17	15	..	..	1	2	46,156	19,655
Illinois	6	3	5	3	..	..	1	..	854	95
Indiana	2	5	..	2	..	1	2	2	...	105
Kansas	15	19	8	11	..	1	7	7	1,490	3,913
Kentucky	20	24	15	15	1	1	4	8	614	1,189
Louisiana	26	19	8	6	8	5	10	8	5,770	5,070
Michigan	12	18	11	14	1	..	..	4	4,870	7,375
New Mexico	1	1	..	..	1	..	..	1	...	...
New York	..	5	..	5	..	..	..	..	...	11
Ohio	40	38	15	14	11	15	14	9	273	318
Oklahoma	83	39	46	27	6	7	31	5	23,912	7,903
Pennsylvania	31	52	7	47	20	3	4	2	47	257
Texas	138	167	72	81	10	11	56	75	31,313	68,016
West Virginia	..	29	..	13	..	13	..	3	...	134
Total	399	450	207	254	58	60	134	136	116,239	114,061
Increase this week	..	..	..	..	..	..	..	..	2,178	...
Decrease this week	51	..	47	..	2	..	2	..	...	...

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
DAVIESS COUNTY—		
The C's Oil Co., Little Huntin 5	70	....
The Petroleum Co., Burns 15	60	....
Huff & Calderwood, Litsey 1	dry	....
Buckner-Larue Oil Co., Knight 1	20	....
Cumberland Petroleum Co., Eastman 4	35	....
Chancellor 1	dry	....
Creek drilling Co., Leet 6	65	....
Trognite Oil Co., Knight 1	15	....
L. C. Young & Co., Sparks 3	¶1	....
Vickers, White & Co., Mills 1	15	435
Bell Stevens & Co., Coomes 1	dry	....
McLEAN COUNTY—		
Leeper Oil Co., Wigginton 1	dry	....
OHIO COUNTY—		
Cumberland Petroleum Co., Hamilton 19	60	....
James C. Ellis & Co., Keith 12	50	....
Sadler 1	35	....
S. H. Russell & Co., Greer 2	30	443
Greer 3	50	443
Buckner-Larue Oil Co., Haines 3	20	600
C.C.C. Oil Co., Mitchell-Berkhead 4	35	....
Whitaker 6	40	....
H. A. Henry, Chambers 3	15	692

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MONROE COUNTY—		
Beighley, Schaffer & Co., Steen-McMullen 1	¶¼	1627
Ohio Fuel Gas Co., Mallett 1	...	1083
Frank Ward, Ward 1	dry	1405
NOBLE COUNTY—		
Spriggs & Co., Bonar 1	dry	816
Rich Bros. & Co., Rich 2	2	....
MORGAN COUNTY—		
Ohio Fuel Gas Co., Davis 1	¶¼	1630
Smith & Dunn, Riley 20	¶¼	1575
WASHINGTON COUNTY—		
Yellow House Oil & Gas Co., Miller 2	¶¼	1779

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Palmer 1	dry	....
The Kemrow Co., Heffelfinger 1	dry	....
Bock, Courtney & Co., Chesrown 1	¶¼	....
Maranville & Co., Myers & Co. 3	dry	700
Robinson & Co., Devinney 4	24	....
Cable 2	¶¼-7	....
HOCKING COUNTY—		
Preston Oil Co., Huggins 2	¶2	2834
Marks 4	*	2910
Hope Construction & Ref. Co., Huggins 4	35	2868
Gordon Oil Co., Brimmer 8	10	2821
LICKING COUNTY—		
Preston Oil Co., Loar 3	9	784
Emerald Petroleum Co., Little 3	100	....
Wehrle Gas Co., Iches 1	¶½	2581
MEIGS COUNTY—		
Preston Oil Co., Williams 3	8	1813
Tyree & Co., Lott 2	6	....
Penn Berea Oil Co., Capehart 3	2	1710
WAYNE COUNTY—		
J. M. Williamson & Co., Williamson 4	dry	....
Barnhardt & Co., Keim 1	dry	....
KNOX COUNTY—		
Ohio Fuel Gas Co., Minard 1	dry	2780
Ohio Fuel Gas Co., DeLong 4	¶1¼	....
MUSKINGUM COUNTY—		
Athey Drilling Co., Hockmeister 1	¶¼	....
Preston Oil Co., Adams 1	dry	3470
COSHOCTON COUNTY—		
Ohio Fuel Gas Co., Rine 1	25	....
FAIRFIELD COUNTY—		
Merle Myers & Co., Johnson 2	¶¼-14	2690
STARK COUNTY—		
Alliance Oil Co., Structure-Farmers 1	3	670
ATHENS COUNTY—		
Polos Oil & Gas Co., McDonald 2	¶½	3901
JACKSON COUNTY—		
Penn Ohio Gas Co., Evans 4	¶¼	2670
MEDINA COUNTY—		
Oko Oil & Gas Co., Brimmer 22	dry	....
GUERNSEY COUNTY—		
Glendenning Dev. Co., Finley 1	dry	1245

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
SENECA COUNTY—		
Columbus-Tiffin Oil & Gas Co., Ropp 2	12	1237
Duncan & Co., Chaney 1	dry	1600
HANCOCK COUNTY—		
L. Cramer, Frey 2	20	1385
WOOD COUNTY—		
Just Oil Co., Smith 1	dry	1419

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
SPENCER COUNTY—		
Sharp Randall, Bretz 1	dry	1297
SULLIVAN COUNTY—		
Burns & Co., Watson 1	dry	825

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
ST. CLAIR COUNTY—		
St. Clair County Oil Co., Hall-Weihl 2	250	538
Ohio Oil Co., Karlton 2	240	644
Morris & Yeager, LaCroix 1	40	510
Pierce, Cox & Co., Osick 1	dry	920
LAWRENCE COUNTY—		
John Phipps & Co., Clark 6	300	493
WABASH COUNTY—		
Highland Oil & Gas Co., Loeffler 1	24	1562

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
MUSKEGON COUNTY—		
Dake, Press & Co., Young 1	1500	2030
DeLong 2	400	2028
Puritan Oil Co., DeLong 1	1200	2020
Dixie Oil Co., McLaughlin D-6	700	2053
Puritan Oil Co., DeLong 1	1200	2020
United Petroleum Co., Peters 1	300	....
Peters 2	600	2026
Black Gold Oil Co., Robertson 1	350	2060
Shoup Oil & Gas Co., Shoup 4	¶5½	2008
Continental Motors Corp., Fee 10	350	1700
Gillette-Beebe Oil Synd., Smeltekop 1	200	1686
Cornelius & Brown, Young 1	150	1700
Nelson & Witt, Clower 1	150	2068
A. S. Cochran, Clower 1	20	1695
Swastika Oil & Gas Co., Gilbert B-2	50	2068

XUM

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO COUNTY—		
English Drilling, Williams 1, se ne, 3-5n-9w	¶7½	2424
CARTER COUNTY—		
Shell, Johnson 1, se nw sw, 18-4s-1w	*	3844
COTTON COUNTY—		
E. J. Stump, Jones 1, nw ne, 11-3s-10w	*	2513
CREEK COUNTY—		
H. U. Bartlett et al, Bartlett "B" 3, ne nw ne, 18-19-9e	¶1¼	2117
Evans Brothers, Evans 1-A, nw se, 31-19-9e	¶2	2497
Gled, Cares 1A, cnl ne sw, 31-19-9e	50	3143
Whitten & Wilcox, Koch 5, sw se sw ne, 11-17-10e	5	2046
C. G. Tibbens, Conneseny 41, sw nw sw ne, 30-15-9e	2	1290
Markham, Beasley 7, ne se nw, 20-17-7e	*	3320
Curtis, Tiger 1, se, 3-17-8e	*	3533
Jackson and Wise, Frank 2, nw sw sw, 1-17-11e	*	1584
Wilcox, Harjo 8, sw se sw, 35-16-8e	*	3200
William Sherry, Sinclair 1, nw ne nw ne, 1-16-11e	*	2694
Edgewood, Johnson 5, nw se sw, 17-14-10e	*	3797
Billingslea & Riverland, Harjo 1, ne se nw, 28-14-10e	*	3390
GARFIELD COUNTY—		
C. E. Knox, Bageter 1, ne nw, 35-22-4w	*	2350
GRANT COUNTY—		
Marland et al, Frantz 2, sw se se, 35-28-3w	¶10	4237
KAY COUNTY—		
Harris & Haun et al, School 2, c ne ne, 36-28-1w	¶¼	890
KIOWA COUNTY—		
Conner & Son, Zacherias, sw nw nw nw, 25-7n-16w		805
LINCOLN COUNTY—		
Wheeler & Mote et al, Wolf 1, nw ne sw, 2-16-5e	*	4124
Texas Pacific Coal & Oil, Long 2, nw se, 5-16-5e	*	2457
Indian Territory Illuminating, Crane 1, ne sw sw, 31-15-5e	*	4862
LOGAN COUNTY—		
Shell Petroleum, McCully 3, nw ne se, 30-19-4w	1675	6065
MUSKOGEE COUNTY—		
Bryan, Simmons 2, sw nw sw, 3-15-15e	12	1462
Bryan, Barnett 2, (owdd) sw se ne, 8-15-15e	20	1669
W. C. Cushing, Myers 1, se sw sw, 23-15-17e (owdd)	*	2550
Cooke and Day, Fields 1, sw nw nw se, 9-15-18e	*	1140
Dewitt-Baldridge, Lee 1, ne se sw, 11-14-16e	*	975
C. H. Loweree, Brown 3, cnl nw se, 5-13-16e	*	1818
OKFUSKEE COUNTY—		
Champlin, Lewis 12, sw se, 15-11-11e	125	3488
Champlin, Jefferson 4, c nw nw, 23-11-11e	5	1683
W. L. Umburn, Simmer 8, se ne ne, 11-10-11e	510	1597
OKLAHOMA COUNTY—		
Cromwell, Thompson 1, sw ne ne, 15-12-3w	*	7182
OSAGE COUNTY—		
J. J. Fitzstephens 1, nw sw ne, 16-28-8e	8	2361
Producers & Refiners, and Peters Petroleum Co., 4, sw se, 22-27-11e	125	1661
W. D. Gray et al 1, se ne ne, 9-24-9e	*	2298
Mid Co. Oil Co. 1, se ne, 17-22-10e	*	2025
Oklahoma Natural 788, sw ne ne ne, 15-21-10e	*	1736
Red Bank 1, se ne nw, 11-20-10e	*	2315
PAWNEE COUNTY—		
Miller & Strattman, Martin 1, sw se, 26-20-9e	*	2145
PITTSBURG COUNTY—		
B. C. Aylor, Martin 1, se nw, 6-6n-14e	*	700
POTTAWATOMIE COUNTY—		
Sinclair, Calvin 2, ne se sw, 7-8-5e	10	4133
Empire, Smith 1, sw se ne, 8-8-5e	1190	4100
Magnolia, Rowe 2, ne nw sw, 18-7-5e	10	4190
Sinclair, Nesbit 7, sw se nw, 18-7-5e	35	4125
Sinclair, Nesbit 8, nw se nw, 18-7-5e	260	4040
Atlantic and Independent Oil & Gas Burke 1, sw ne, 16-7-4e	890	3850
Phillips, Lydick 1, (owdd) se ne, 24-7-4e	35	4199
Magnolia, Cherry 5, nw sw ne, 26-7-4e	10	4355
Simms et al, Laster 1, se ne ne, 19-6-4e	3785	3699
SEMINOLE COUNTY—		
Independent, Alexander 1, se sw sw, 31-10-6e	*	4390
Indian Territory Illuminating, Peterson 1, se sw nw, 24-7-5e	*	4479
Sinclair, Joanna 1, ne nw, 24-5-7e	*	4501
Superior, Ingram 3, ne nw nw, 1-9-5e	510	4329
Gypsy, Moser 4, sw se ne, 1-8-5e	130	4225
Barnsdall, Coker 6, sw ne sw, 11-8-5e	500	4162
Barnsdall, Coker 8, ne sw sw, 11-8-5e	115	4198
Empire, Cluck 7, se nw se, 11-8-5e	765	4186
Sinclair, Harjo 3, ne sw se, 11-8-5e	570	4281
Tidal, Nellie 4, se, 12-8-5e	700	4218
Tidal, Nellie 5, nw se se, 12-815e	655	4205
Skelly & Lenox, Green 1, nw sw sw, 20-8-5e	335	4177
Gypsy, Barkus 7, ne se sw, 6-8-6e	945	4167
Gypsy, Mission 8, sw se se, 6-8-6e	800	4263
Gypsy, Mission 9, ne se, 6-8-6e	300	4305
Gypsy, Doser 5, nw ne ne, 7-8-6e	860	4297
Gypsy, Hardy 5, nw se nw, 7-8-6e	360	4316
Gypsy, Harjohe 4, sw ne se, 7-8-6e	150	4413
Independent et al, Payne 3, sw ne nw, 7-8-6e	735	4380
Independent et al, Payne 4, se ne nw, 7-9-6e	300	4476
Shell & Papoose, Mines 5, se nw sw, 7-8-6e	440	4271
Sinclair, Hardy 4, sw ne sw, 7-8-6e	630	4302
Carter, Fuswa 4, nw, 18-8-6e	20	4020
Gypsy, Cotcha 8, sw, 23-7-6e	2465	3175
Carter, Larney 2, nw sw nw, 26-7-6e	500	3280
Independent, Carpenter 1, (owdd) ne, 27-7-6e	2100	3121
STEPHENS COUNTY—		
Beaver, Funk 1, sw nw ne nw, 30-1n-8w	75	2280
Magnolia, Green 8, sw nw nw, 13-1s-4w	100	3245
Magnolia, Peck 4, se ne, 13-2s-8w	90	1348
Heydrick et al, Thompson 1, sw se nw, 1-1n-8w	*	2511
Razoe & Aiken, Grooms 1, c nw, 10-1n-17w	*	726
TULSA COUNTY—		
Nowata, Badray 4, sw ne se, 30-19-12e	*	2466
WAGONER COUNTY—		
Wright & Kunkel, Oliver 2, csl nw sw, 3-16-15e	*	1181
Ashe Brothers, Childers 1, sw se, 15-18-17e	¶2½	809

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
CHAUTAUQUA COUNTY—		
Edward G. Bodge, McKeown 1, sw ne se, 31-32-10e	25	1670
Griffin & Bell, Curran 1, ne, 12-32-10e	*	2043
COFFEY COUNTY—		
McCullouch et al, Hutchinson 1, sw se nw, 18-23-16e	*	1490
Sheedy et al, Niver 1, sw se se, 6-22-14e	*	1833
Union Gas, Rogers 1, sw nw, 9-22-14e	*	1600
COWLEY COUNTY—		
Trees, Smith 6, sw se, 10-31-3e	30	3079
Shawver et al, Morgan 1, nw ne, 16-31-3e	50	3082
Hall Jones et al, Manley 1, nw nw sw, 20-30-6e	*	3358
Shawver et al, Vaught 1, sw, 24-31-3e	*	3400
MARION COUNTY—		
Empire, Suderman 2, ne se ne, 12-19-2e	25	2861
Shell Petroleum, Suderman 1, se ne ne, 12-19-2e	35	2830
RUSSELL COUNTY—		
The Texas, Leonard 1, nw, 6-13-15w	55	3016
SEDGWICK COUNTY—		
Bu Vi Bar, et al, Bright "A," se, nw, 6-26-1e	85	3384
Manitou, Lavender 2, se sw, 6-26-1e	1185	3385
Jones and Kirk, Sherman 1, se ne, 4-25-1e	*	3509

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Falcon Drilling Co., Muslow B-1, 29-20-15	25	2302
Standard Oil Co. of La., W. K. Henderson 1, 7-19-14	*	2427
Root Ref., Liebman 1, 12-19-15	*	2588
BOSSIER PARISH—		
Woodley Pet. Co., Whitehurst 4, 35-16-12	¶1½	2422
OUACHITA PARISH—		
Interstate Nat. Gas Co., Hunter-McCormick 5, 40-20-3e	¶5½	2170
La Del Oil Prop., Inc., Fee 47, 6-19-5e	¶6½	2185
Magnolia Petroleum Co., U. S. Govt. 3, 18-19-5e	¶½	2265
Pioneer O. & G. Co.'s Feedicar 1, 18-18-5e	¶4⅝	2277
SABINE PARISH—		
R. L. Gay, Tr. Bowman-Hicks 2 (new series), 14-7-14	*	3621
R. L. Gay, Tr., Bowman-Hicks 3, 14-7-14	15	2178
TENSAS PARISH—		
Enochs et al, Curry 1, 39-11-12e	*	3765
UNION PARISH—		
Imperial O. & G. Co., Pullen 1, 20-20-4e	¶7.8	2155

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
JOHNSON COUNTY (Spadra)—		
Ark. Nat. Gas Corp., Bynum 2, 12-10-24	*	3125
UNION COUNTY (Champagnolle)—		
Ohio Oil Co., Lynn 1, 7-17-13	900	3077
UNION COUNTY (Hillsboro)—		
Grimes Bros.' Hill 2, 7-17-14	20	2263
UNION COUNTY (Lapile)—		
J. O. Moore, Tr., Union Sawmill 1, 11-18-12	*	3304

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BAY COON ROAD DOME—		
The Texas Co., Bay Coon Road B-1	¶25	680
DARROW DOME—		
Gulf, Belle Helene Sugar Co., 1	*	5600
EAST HACKBERRY—		
Calcasieu Oil Co., Lemke 1	100	3884
Doiron 6	*	4057
EDGERLY—		
C. M. Crotty, Lillard 7, dd	35	2535
EVANGELINE—		
Yount-Lee Oil Co., Houssiere 6	5000	7292
LOCKPORT—		
Vacuum-Gulf, Bayou D'Inde State 5	450	4420
SWEET LAKE—		
Pure Oil Co., Yount-Lee Oil Co. 8	130	5637

TEXAS

GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BATSON—		
East Batson Oil Co., Donoho & Cashion 14	4	525
HIGH ISLAND—		
Gulf, Geo. E. Smith 8	*	2980
HULL—		
Republic Prod. Co., Dolbear 97	1500	2245
ORANGE—		
Sinclair O&G Co., Granger 5, dd	150	3035
Brownie-Babbett Oil Co., McLean 8, dd	30	4030
Orange Pet. Co., Michael-Berwick 3, dd	10	3065
PIERCE JUNCTION—		
Moody Corp., Hume 4	*	3510
Navarro Oil Co., Dooley 15	1000	4500
Cain B-1	1000	4900
Gulf, Cain 8	1750	4650
Taylor 29	1200	3800
SOUTH LIBERTY—		
Sun Oil Co., Mitchell 44	40	1250

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
HARRISON COUNTY—		
Nick Barbare, Saunders 2, E. M. Jenkins sur	¶1	2404
C. H. Lyons et al, M. M. O'Banion 2, W. H. Adams sur	¶1	2398

(Continued on page 108)

Don't throw up your hands

- when tubing fails!

When ordinary tubing fails, try BYERS.

Service records taken from oil fields where corrosive conditions are severe show BYERS to be giving two to ten times greater life than ordinary tubing. Made of the highest grade of genuine wrought iron, you can depend upon BYERS to give the most value per dollar invested.

Ask us for specific service records which you can check.

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Norvell-Wilder Hdwe. Co.
Jarecki Mfg. Co.
Oil Well Supply Co.

Say you saw it in The OIL WEEKLY

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
SALT FLAT—		
Cranfill & Reynolds, Hanson 3	*	2712
Humble, J. R. Tiller 2-A	700	2702
Clyant Smith 1-B	100	2538
J. R. Tiller 1-B	350	2694
J. R. Tiller 2-B	200	2710
Shell, Clyant Smith 1	350	2311
COLE FIELD—		
Trussell, Cezeaux, Putnam, Inc., Bruni 2	¶25	2336
ZAPATA COUNTY—		
H. Muckleroy, Jr., Trevino 1, Jennings field	¶3	1300
DUVAL COUNTY—		
Humble, Kohler 24	20	1814
ZAVALLA COUNTY—		
Tritex Gas Co., A. W. West 5	¶20	850

TEXAS PANHANDLE

CARSON COUNTY—		
McIlroy Oil Co., T. D. Lewis 1	90	3160
Spartan Oil Co., Bednorz 1	¶50	3393
GRAY COUNTY—		
Operators Oil Co., Wm. Jackson 7	¶3-14,250	2963
Sun Oil Co., Purviance 1	¶3-925	2914
The Texas Co., Purviance 1	¶5-930	2925
HUTCHINSON COUNTY—		
Marland Prod. Co., Sanford 1-C	2000	2785
Phillips Pet. Co., Johnson-Florence 5	650	2943
Johnson-Ford 2	565	2875
Johnson-Pulaski 4	400	2903
MOORE COUNTY—		
Canadian River Gas Co., Gilmore 1-A	¶27	3503
Phillips Pet. Co., Burnett-Stella 1	¶23	3582
Sneed-James 3-A	35	3139
WHEELER COUNTY—		
Gibson Oil Corp. et al, Bentley 7,	¶8-500	2390
The Texas Co., G. Gordon 2	¶30	1884

WEST TEXAS

JONES COUNTY—		
Humble O&R Co., Bickley 1	105	2477
Phillips Pet. Co., Walters 1	50	2865
REAGAN COUNTY—		
Big Lake Oil Co., University 160	150	3078
University 161	300	2996
University 164	250	2875

NORTH TEXAS

ARCHER COUNTY—		
L. T. Burns et al, Slopansky 1	*	1553
Continental Oil Co., Logan 2-A	10	1130
Richardson 2-B	200	1152
Fain-McGaha Oil Corp., Taylor 1-A	130	1491
Gulf Prod. Co., H. L. Ward 5	5	1031
P. F. Gwynn-Boyd Drlg. Co. et al, Thompson 2	*	1598
Hiland Oil Co., Birdwell 1	*	1852
Harry Hines et al, Slaughter 1	*	1481
Wallace 3	*	1785
Humble O&R Co., Falls County 2	*	1223
Identity Oil Co., Parrish 1	*	1304
J. B. Peacock et al, Williams 1	†	560
Petroleum Prod. Co. et al, Phillips 3	30	1181
Coleman 1	*	1575
Prairie O&G Co., Richardson 2, (Lot No. 13)	15	1174
F. P. Ross et al, Campbell 1	*	1350
Shappell Oil Co., Jackson 47	25	1803
W. H. Smith, Jr., et al, Prideaux 3	15	731
A. T. Wolf & Son, Campbell 1	*	800
BURKBURNETT—		
Clark & Bridwell, Frankl 1	*	1950
G. H. Howell et al, Foster-Allen 1	20	1794
Magnolia Pet. Co., Reilly 142	†	1015
CLAY COUNTY—		
American Refineries, Fee 3	*	1010
L. L. Bain et al, Culbertson 5	3	392
Mid-Continent Holding Co., Stine 1-C	25	1756
COOKE COUNTY—		
The Texas Co., Dennis 9	250	1251
ELECTRA—		
L. G. Bradstreet & Co., Waggoner 1-E	*	2060
Golding-Cochran et al, Waggoner Bros. 2	85	1302
Waggoner Bros. 3	170	1305
W. H. Hammon & Heyser, McCarty 10-C	†	2067
Harry Hines et al, Burnett 4-A	15	1405
Venmex Oil Co., Waggoner Bros. 18	20	1490
JACK COUNTY—		
Bryson O&G Co., Dougherty 1-A	60	3220
K-M-A AND IOWA PARK—		
Barclay & Faith Oil Co., K&K 2	*	1803
Petroleum Prod. Co., Allen-Kemp 3	15	1762
Riner & Bailey, Michie 2-D-A	50	1677
Rubsam & Hunter, McClure 5	15	567
Wilson Drlg. Co., K&K 5	*	1975
MONTAGUE COUNTY—		
The Texas Co., Salmon 4-C	*	2003
WILBARGER COUNTY—		
C. P. Burton et al, Waggoner 2-I	400	1880
Carter et al, Waggoner 2	85	1998
Consolidated Oil Co., Waggoner 1-N	*	1945
Fain-McGaha Oil Corp., Waggoner 3-W	30	1851
Hammond & Mitcham, Waggoner 1	*	2018
E. B. Lawson et al, Waggoner 1-F	*	2568
Melat Oil Co., Waggoner 6-A	70	1997
O'Neil et al, Parker-Colbert 1	*	2600
Robertson et al, Waggoner-Webb 2	70	1997
Simpson-Fell Oil Co., Waggoner 1	*	2205
Staley-Wynne & Co., Waggoner 3-B	170	1910
Waggoner Ref. Co., Waggoner 7-K	25	2383
Waggoner 4-L	270	2393
YOUNG COUNTY—		
L. G. Bradstreet et al, Richardson 2	*	715
Continental Oil Co., Campbell 9-B	*	929
Edmondson et al, Johnson 1	*	615
Hawkins et al, Owens 2	*	755
Kimbrell & Lyles, Dyer 4	3	584
John L. McMeans et al, Keith 1	*	850
Petroleum Prod. Co., Whitt 1	30	1025
Riggs et al, McKinley 29	25	585
Strivers & Streeter, Lobban 1	*	4370

CENTRAL WEST TEXAS

BROWN COUNTY—		
Bierman & Barbara Oil Co., Miller 3	*	1116
Anzac Oil Corp. et al, Brooks 1	*	1397
J. L. Duffey et al, Hill 1	*	1015
Pandem Oil Corp., Westerman 12	*	1265
Warren et al, Duff 2	80	1151
CALLAHAN COUNTY—		
Gunn Prod. Co., Orvell 1	15	1694
Oyster & Rife et al, Ross 1	*	1542
T. P. Coal & Oil Co., Westerman 12	*	460
COLEMAN COUNTY—		
Cunningham et al, Jennings 8-C	25	1190
Harry Gwinnup et al, House 2	*	2054
H. Samuels et al, Gill 1	*	1005
Stepp & Vandevetter, Shore 1	¶2½-8	928
EASTLAND COUNTY—		
Conway Bros. & Champion, Simmons 3	30	1136
J. McLester et al, Allen 2	*	3375
Mook-Texas Oil Co., Parker 1	*	3620
Parsons et al, Stubblefield 1	*	3495
ERATH COUNTY—		
Associated Prod. Co., Cary 2	¶3½	3250
House et al, Fulfer 1	*	3565
SHACKELFORD COUNTY—		
Cranfill & Reynolds, Moberly 1-B	25	1040
Walter Rittersbusch et al, Nail 1	*	1202
Simms Oil Co., Lones 10	20	768
The Texas Co., Gillespie 1	*	2272
STEPHENS COUNTY—		
Lone Star Gas Co., Brooks 1	¶1-50	3928
Compton 1	*	4182
T. P. Coal & Oil Co., S. A. Pearce 3	5	2044

NEW MEXICO

LEA COUNTY—		
T. P. Coal & Oil Co., State 1	¶15	3995

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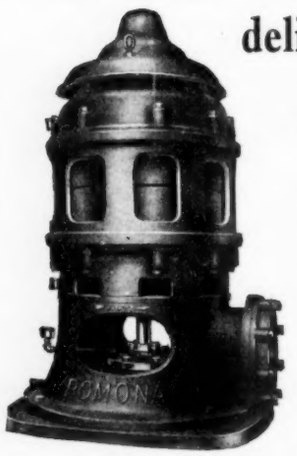

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Houston, Texas

Committee Meets June 21 At Chicago

New York.—Fayette B. Dow, Washington counsel of the American Petroltum Institute, has called a meeting of the Institute's general committee on railroad transportation, of which he is chairman, for June 21 at Chicago. Sessions will begin at 10:30 a. m., daylight saving time, in the Stevens Hotel.

Organization of standing topical committees is among the activities listed on the docket. H. W. Roe of the Mid-Continent Petroleum Corporation, Tulsa, chairman of the committee on organization, will present the recommendations of the committee.

Reports will be received also from committee chairmen: B. J. Burchett of the Shaffer Oil and Refining Company, Chicago; J. M. O'Day, Sinclair Refining Corporation, New York; D. F. McCarthy, Producers and Refiners Corporation, Independence, Kansas; E. E. Harrington, National Refining Company, Cleveland, and L. H. Benner, Standard Oil Company of New York, New York.

XUM

PERMITS GRANTED FOR NEW WELLS

LOUISIANA

ACADIA PARISH—Port City Oil Co., Lake Charles, Heywood Bros. 11, 41-9s-2w, 2050 ft nw of se of n½ of Fracl. Sec. 41 and 750 ft e of w li.

CADDO PARISH—Sam Sklar, Trustee, Shreveport, S. S. Hunter Est. 1, 17-19n-14w, 330 ft s and 330 ft e of nw c sw ne.

MOREHOUSE PARISH—Southern Carbon Co., Monroe, La., Tensas Delta 11, 34-21n-4e, 710 ft n and 660 ft w of se c.

OUACHITA PARISH—J. S. Herkness, Bastrop, La., (c/o A. J. Flint, R. F. D. 3), Bowles 1, 20-20n-5e, 1806 ft e and 3165 ft s of n¼. Mack & Pipes, Monroe, La., Cagle 1, 7-18n-5e, 283 ft s and 192 ft e of c Sec. 37 in Sec. 7. Magnolia, Shreveport, La., Fee 404 2, 15-19n-5e, 660 ft n and 660 ft w of se c se se; Fee 404 3, 11-19n-5e, 660 ft n and 660 ft of sw c; U. S. Govt. 4, 20-19n-5e, 660 ft n and 660 ft e of sw c nw. Ouachita Natl. Gas Co., Monroe, La., Smith 10, 40-20n-4e, 900 ft e and 460 ft n of nw c irregular Sec. 40.

RICHLAND PARISH—Hope Prod. Co., Monroe, La., J. A. Eubanks 1, 26-17n-6e, 3288 ft w and 1980 ft s of ne c; Binion & Sartor 1, 28-17n-6e, 440 ft s and 880 ft w of ne c. International Gas Products Co., Monroe, La., Beck 1, 25-16n-6e, 660 ft n and 660 ft e of sw c. Palmer Corp. of La., Shreveport, Hartwick 1, 16-17n-6e, 3790 ft w and 660 ft n of se c; Palmer Corp. of La., Shreveport, N. Jones 1, 22-17n-6e, 1980 ft s and 660 ft e of nw c; Palmer Corp. of La., Shreveport, R. R. Rhymes 4, 21-17n-6e, 3320 ft w and 660 ft s of ne c. Palmer Corp. of La., Shreveport, Mrs. K. Whitten 1, 21-17n-6e, 1992 ft w and 660 ft s of ne c.

ST. BERNARD PARISH—Gulf Coast O. & G. Dev. Co., New Orleans, State Land 1, 15-14s-15e, 659 ft n and 1070 ft w of se c.

UNION PARISH—Bahan & Bahan, Shreveport, School Board 1, 10-20n-3e, 1110 ft n and 965 ft w of se cor of Sec. Friend & Bahan, Shreveport, Barr 1, 16-20n-4e, 489 ft s and 733 ft e of nw c. Edwin S. Hall, Monroe, Spencer 2, 36-21n-3e, 660 ft n and 660 ft w of se c ne. Imperial O. & G. Co., Monroe, Imperial (Fee) A-1, 30-20n-4e, 650 ft n and 223 ft w of se c nw nw.

OKLAHOMA

CADDO COUNTY—Abernathy & Brown, Horton 1, se, 8-6n-13w. Oklahoma Gas Utilities Corp., Williams "A" 2, ne sw sw, 11-4n-8w, (owdd).

COTTON COUNTY—Heydrick et al, Bull 1 sw se, 3-1s-10w. Cullum & Perkins, Priddy 6, se ne ne, 3-2s-10w.

CREEK COUNTY—McCulloch Oil, Davis 1, nw, 21-19-9e. Glen, Evans et al, Oglesby 1, sw, 30-19-9e. Gled, Gilreath 1, ne nw sw, 31-19-9e. Jackson & Wise, Oglesby 1, se ne se, 14-18-8e. Apex, Fife 2, ne sw sw, 28-18-11e. Jackson & Wise, Taylor 1, se nw, 3-17-10e.

GRANT COUNTY—Amerada ,Clark 1, ne nw, 17-29-4w. Gypsy, Gibson 1, nw ne, 17-29-4w.

HUGHES COUNTY—W. B. Pine, Scott 1, ne, 6-8-9e.

JEFFERSON COUNTY—Gypsy et al, Nesmith 1, ne nw se, 2-7s-7w.

LINCOLN COUNTY—Magnolia, Sukovaty 8, (owdd) sw ne ne, 3-14-5e.

LOGAN COUNTY—Shell, McCully 9, sw se, 30-19-4w.

MUSKOGEE COUNTY—C. W. Betz, Friday 1A, cnl ne ne, 7-15-15e. J. R. Parks, Lovett 1, swl se nw, 21-15-15e. Johnstone et al, Smith 1, se, 13-13-18e.

OKFUSKEE COUNTY—Independent, McNac 1, nw, 33-12-10e. E. L. Robinson et al, Savers 3, sw nw se, 35-11-9e. Minnehoma, Grayson 1, ne nw se, 31-11-11e.

OKMULGEE COUNTY—Rounsaville et al, Tunley 3, ccl nw se, 30-12-12e. Prince & Anderson, Butler 1, se sw sw, (owdd), 21-12-14e.

OSAGE COUNTY—Galt-Brown 6, csl n½ nw, 7-24-8e. Silurian 55, sw ne nw, 17-23-12e.

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending May 31	Previous week	Total this month	Total this year	This week Last Yr.	This month 1928	1928 year total
Arkansas	2	2	5	56	19	36	331
California	25	16	83	560	13	56	1,207
Louisiana	13	12	46	311	13	49	680
Kansas	17	31	112	395	19	66	1,032
Oklahoma	47	60	266	1,243	56	264	3,744
Texas	156	185	678	3,290	205	727	8,297
Total	260	306	1,190	5,855	325	1,198	15,291

J. H. Craig 5, sw nw ne, 8-22-11e. Oklahoma Power & Water 116, nw sw, 28-21-10e. Oklahoma Natural Gas 1713, se ne sw, 10-21-10e. Oklahoma Power & Water 118, cnl nw sw, 10-20-10e.

PAWNEE COUNTY—Peter Adamson, Parker 3, sw se se, 24-21-7e; Parker 4, ne sw se, 24-21-7e; Scully 1A, ne nw ne, 25-21-7e.

PAYNE COUNTY—Transcontinental, Powers 2, sw nw nw, 10-18-5e.

PONTOTOC COUNTY—Benedum & Trees, Mathews 1, ne se, 31-5-5e.

POTTAWATOMIE COUNTY—W. B. Pine, Smith 2, se sw ne, 8-8-5e. Magnolia, Richardson 1, nw sw sw, 15-7-4e. Independent and Westland, Rhodd 2, sw nw nw, 16-7-4e; James 1, nw se sw, 17-7-4e. Pierce, Sanders 1, (owdd) nw sw, 20-7-4e. Stauffer et al, Townlot 1, nw nw se, 18-6-4e. Winkler, Townlot 1, nw sw sw se, 18-6-4e. Texola, Townlot 1, ne nw sw sw, 18-6-4e. Stogner et al, Townlot 1, nw ne se sw, 18-6-4e. Diegnan et al Townlot 1, cwl se nw, 18-6-4e. Texola, Townlot 1, nw, 19-6-4e.

SEMINOLE COUNTY—Empire, Cluck 13, se ne, 11-8-5e. W. B. Pine, Harjo 3, nw sw se, 6-8-6e. The Texas, Janey 7, (twin) se ne sw, 11-7-6e. Gypsy, Cotcha 16, (twin) se nw sw, 23-7-6e. Mid-Continent, Smith 10, ne nw se, 6-7-7e. Empire, Fish 1, ne se 19-7-8e. Carter, Fish 1, sw nw, 20-7-8e. Blackwell, et al, Hall 1, se, 6-6-8e.

STEPHENS COUNTY—Pace et al, McMasters 4, ne se nw ne, 13-2s-8w. Pace et al, Bristowe 4, sw nw, 18-2s-7w. Pace et al, Watkins 1, nw se nw se, 21-2s-7w.

WAGONER COUNTY—Western Drilling and Equipment, Drake 1, se ne ne sw, 34-18-17e.

KANSAS

GREENWOOD COUNTY—The Texas, Banard 1, se sw nw, 6-23-10e. Transcontinental, Cook 1, se ne, 16-24-10e. Roth & Faurot, Welch "C" 1, ne se se, 13-25-8e.

LYON COUNTY—Statts and Spencer, Milner 1, sw, 33-21-11e.

MARION COUNTY—Shell, Ramepl 1, ne se se, 12-19-2e.

SEDGWICK COUNTY—Tidal, Duncan 1, sw se, 31-24-1e. Bu Vi Bar et al, Reed 1, se, 1-26-1w. Davis et Skelly et al, Wilson 8, se sw ne, 1-26-1w.

SMITH COUNTY—Phillips, Clydesdale 1, se nw, 23-5-14w.

CALIFORNIA

BREA-OLINDA—Brea Canon Oil Co. 46, 2-3-10.

KERN COUNTY—A. Bruce Frame Bowles 1, 21-26-28.

KETTLEMAN HILLS—Standard Oil Co. 2, 35-22-18; 21, 33-21-17.

LONG BEACH—A. T. Jergins Trust 26, 19-4-12; 28, 19-4-12. Marine Corp.-Apex Pet. Corp., 17-A, 19-4-12. The Texas Co., Foster 1-5, 19-4-12.

MIDWAY—Honolulu Cons. Oil Co. 84, 8-32-24. Standard Oil Co. 14, 5-32-24.

MT. POSO—Union Oil Co., Tribe 2, 28-27-28. General Pet. Corp., Glide 21, 21-27-28.

MONTEREY COUNTY—W. F. Broun 1, 15-23-14.

POTRERO—Associated Oil Co., Pacific-Southwest 2, 34-2-14.

RICHFIELD—Superior Oil Co., Guarantee 1, 33-3-9.

SANTA BARBARA COUNTY—Pacific-Western Oil Co., Wylie 1, —4-30.

SANTA FE SPRINGS—Shell Oil Co., G. H. N. 23, 31-2-11. General Pet. Corp., S. F. 168-F, 5-3-11. Shell Oil Co., G. H. N. 22, 6-3-11. Geo. F. Getty, S. F. S. 38, 5-3-11; S. F. S. 39, 5-3-11. Richfield Oil Co., Howard 5, 5-3-11.

STANISLAUS COUNTY—W .E. Randolph 1, 20-3-13.

SUMMERLAND—Scott Bros., Well Drlg. Co. 1, —4-26.

SEAL BEACH—Marland Oil Co., McGrath & Selover 18, 3-5-12. Bixby 28, 2-5-12.

VENTURA—Shell Oil Co., Taylor 44, 28-3-23. Gosnell 34, 28-3-23. Associated Oil Co., Hartman 16, 22-3-23.

ARKANSAS

BRADLEY COUNTY—Phillips Pet. Co., J. W. Kline 1, 430 ft w and 530 ft s ne c ne se Sec. 28-16-16.

UNION COUNTY—Pure Oil Co., M. H. Nash 2, 1660 ft n 1648 ft w se c Sec. 7-17-13. Ark. Drilling Co. et al, Tom Jones 1, center of ne ne 5-17-18. W. M. Coates, Tr., McDuffie 1, 400 ft n and 200 ft w se c sw nw Sec. 32-19-16.

COLUMBIA COUNTY—Jacob Laskin et al, T. T. Dennis 1, 550 ft s and 550 ft w ne c sw sw Sec. 11-20-23.

TEXAS

ARCHER COUNTY—C. W. Clark, Wichita Falls, J. H. Turbeville, 50, 1, B 170, R. Carson sur, ne. Petroleum Prod. Co., Wichita Falls, W. H. Taylor, 20, 1, B 17, Amer. Trib. sur, 510 ft from n and 150 ft from e line w½ L 10. United Prod. Co., Wichita Falls, W. H. Taylor, 20, 2, B 17, Amer. Trib. sur, 810 ft from n and 150 ft from e line e½ L 10. Kemrow Co., Electra, J. W. Campbell, 65, 5, No. 3 Bl, D.C.S.L. sur, 150 ft from s and w lines W. C. Young, Archer City; Fee, 48, 1, D.L&C sur, 150 ft n of center of s line; Fee, 40, 1, Hooper & Wade sur, 150 ft from s and e lines. Contienental Oil Co., Wichita Falls, FCSL B, 100 Bl, B 15, F.C.S.L. sur, 250 ft from w and 990 ft from s line Blk 15. Bridwell & Continental Oil Co., Wichita Falls, W. J. Logan, 160, 1, J. M. Taylor sur, 150 ft from s end e lines. Prairie O. & G. Co., Ranger, E. R. Boyles, 100, 1, S 22, F.C.S.L. sur, 150 ft from n and 450 ft from w line. Underwood Drilling Co., Wichita Falls, M. P. Andrews, 40, 1, 1805, T.E.&L. sur, 150 ft from n and 1050 ft from w line J. E. Peacock, Wichita Falls; G. Williams, 40, 1, M. Swing sur, 150 ft from n and 440 ft from w line; B. Garrett, 40, 1, J. Walker sur, 343 ft from n and 165 ft from w line. Perkins & Cullum, Wichita Falls, W. L. Andrews, 70, 1, S 143, R. Carson sur, 450 ft from n and e lines. Golding & Cochran, Wichita Falls, J. M. Bloodworth, 63, 1, M.

XUM

Cartwright sur, 150 ft from n and w lines. R. N. Hamilton, Wichita Falls, P. Browning, 150, 2, B 88, L. P. Hunt sur, 1756 ft from e and 550 ft from s line B 88. J. H. Massie, Wichita Falls, L. F. Wilson, 40, 7, S 23, Amer. Trib. sur, Lot 4, 350 ft ne of No. 5. Shappell Oil Co., Wichita Falls, J. L. Jackson, 243, 47, B 5, D.C.S.L. sur, No 3, 450 ft from e and 530 ft from s line. B. C. McCarty et al, Box 411, Archer City, C. Lane, 50, 1, B. 46, L. M. Meade sur, 150 ft from n and w lines. Fain-McGaha Oil Corp., Wichita Falls, W. H. Taylor, B 40, 1, S 17, Amer Trib. sur, 150 ft from s and w lines of lot 8. Bridwell Oil Co. & Gohlke, Wichita Falls, L. F. Wilson, 81, 5, Geraldine sur, 150 ft from s and e lines, n½ of Blk. 32. Jones & Holcombe, Wichita Falls, W. H. Taylor, 15, 1, B 61, Holliday sur, 150 ft from n and w lines of Blk. 61. Humble, Wichita Falls, W. L. Kunkel, 40, 2, S 3, B.B.B.&C. sur, 150 ft from s and e lines. Fresno Oil Co. & Gifford, Wichita Falls, R. O. Prideaux, 58, 16, A. Rohus sur, 150 ft from s and 1350 ft from w line. Bailey-Damuth Drilling Co., Wichita Falls, J. B. Miller, 10, 1, B 20, Amer Trib sur, 80 ft from n and 150 ft from w line L 15. Continental Oil Co., Wichita Falls, F.C.S.L., 25, 1, B 16, Falls C. S. L. sur, 150 ft from n and w lines of Bldk 16. Fain-McGaha Oil Corp., Wichita Falls, W. H. Taylor, A 20, 1, B 17, Amer. Trib. sur, 150 ft from n and w lines s½ Lot 11. Panhandle Refg. Co., Wichita Falls, B. N. Orton, 80, A11 S 2, S. P. Ry. sur, 450 ft from n and 150 ft from e line. Sorrells & Jackson & Barkey, Breckenridge, W. R. Ball, 40, 1, S 10, A. Manley sur, 450 ft from s and w lines. Harry Hines, Wichita Falls, J. T. Slaughter, 60, 1, S 15, L. M. Meade sur, 150 ft from n and w lines. P. F. Gwynn, Wichita Falls, A. D. Thompson, 32, 2, S 30, B 11, Amer-Trib. sur, 150 ft from s and e lines. United Prod. Co., Wichita Falls, W.R. Brown, 40, 1B, B 150, Amer. Trib. sur. Rose & Beavers, Wichita Falls, W. T. Campbell, 50, 1, B 11, I. Holman sur, nw of lease. Petroleum Prod. Co., Wichita Falls, M. Phillips, 50, 3, BBB&C sur, 358 ft so of No. 1. Texas Co., Wichita Falls, Kemp & Kempner, B 160, 3, B 67, W.V.F.L. sur, 465 ft w of No. 2. L. T Burns, Wichita Falls, L. W. McCrory, 150, 1L, B 94, Amer. Trib. sur, 2160 ft from w and 1320 ft from s line L 3. C. B. Long et al, Wichita Falls, F. Thom, 60, 1, W. H. Spillers sur, 150 ft from e of center of w line. Johnson & Fraser, Wichita Falls, J. M. Key, 80, 1, B 58, Harris sur, 150 ft from n and e lines of Blk. 58. Prairie O. & G. Co., Ranger, J. T. Richardson, B No. 27, S 1, S. P. Ry. su. Maycamp Drilling Co., Fort Worth, H. O. Prideaux 105, 5, A Rohus sur, 500 ft w of No. 2. Jesse Lincoln, Archer City, S. Wilson, 40, 1A, G. C. Wiseman sur, 150 ft from w and 450 ft from n line. L. P. Hammond, Wichita Falls, Parish, 160, 1, B 98, Amer Trib. sur, 1170 ft from n and w lines of Blk. 98. Prairie O. & G. Co., Ranger, D. Thompson, 2, B 13, T. McCoy, 750 ft from s and w lines. F. P. Cullum, Wichita Falls, A. Parrish, 20, 1, No. 2, S. P. Ry. sur, 150 ft from n and 2676 ft from w line. L. T. Burns, Wichita Falls, O. Slopansky, 200, 1, B 64, J. W. Harris sur, 150 ft from s and w lines. Continental Oil Co., Wichita Falls, J. T. Richardson, 117, B2, B10, T. McCoy sur, 329 ft e of No. B1. Gulf Prod. Co., Fort Worth, H. L. Ward, 640, 5, BBB&C sur, 423 ft ne of No. 4. Fain-McGaha Oil Corp., Wichita Falls, W. J. Logan, B 160, 7, Ilison Arms sur, 150 ft from s and 750 ft from e line. W. E. Maxon Jr., Wichita Falls, F. C. Green, 320, 4, J. Levins sur, 300 ft e of No 3. McLaughlin Bros., Wichita Falls, W. M. Justice, 40, 1, B 7, W. H. Patton sur, 273 ft from w and 150 ft from s line. Smith-Archer Oil Co., Amarillo, Prideaux, 40, 3, S 1860 TE&L sur, 150 ft from s and w lines. Panhandle Refg. Co., Wichita Falls, H. Ratzer, 160, 1, S 2, I. Ry. sur, 450 ft from w and 1250 ft from s line; H. O. Prideaux, 105, 17c, A. Robus sur, 300 ft we of No. 16. Brosn Farm Oil Co., Wichita Falls, E. T. Brown, 277, 3, S 2, S. P. Ry sur, 150 ft from s and w lines.

AUSTIN COUNTY—Humble, Houston, R. B. Woodley, 2, Wm. Harvey sur, center; J. C. Walton, 50, 3, W. C. White sur, 860 ft from se and 675 ft from ne line; R. Deutrich, 1107, 3, W. C. White sur, Austin College, 4, Wm. Harvey sur, 427 ft from ne and nw lines; R. R. Jackson, 25, 1, W. C. White sur, center; R. Thompson, 4, W. C. White sur, center; Bellville School, 2, W. C. White sur, 1555 ft from nw and 439 ft from sw line; H. F. Granau, 1, Wm. Smeathers sur, 482 ft from sw and 350 ft from nw line; E. Reese, 3, Wm. Smeathers sur, 650 ft ne of No. 2.

BROWN COUNTY — T. G. Shaw, Fort Worth, D. A. Jopling 50, 1A, B 599, H. C. Collins sur, 150 ft from n and 1200 ft from w line. Humble, Wichita Falls, A. W. Armstrong 145, 19, J. Delgado sur, 1467 ft from n and 700 ft from e line. Jas. H. Green et al, Brownwood, G. Barnes 40, 1, S 106, Johnson sur, 150 ft from n and 450 ft from e line. Janellen Oil Co., Brownwood, J. C. Wallace 292, 1, C. E. Jackson No. 103 sur, 800 ft from n and 700 ft from w line. C. O. Moore Oil Corp., St. Louis, Mo., F. H. Cross 25, 3, J Kinney sur, 450 ft from n and 150 ft from e line. American-Maracaibo Synd., Fort Worth, W. G. Duff 20, 1, No. 623, R. Honeycutt sur, 150 ft from s and e lines.

BEXAR COUNTY—Lloyd Bender, San Antonio, F. A. Jackel 106, 1, No. 184, A. Baley sur, 250 ft from n and 500 ft from e line. Dismukes & Hughes, San Antonio, H. A. C. Gembler 175, 1, No. 5, M. Gotari sur, sw corner.

BEE COUNTY—Mission Drilling Co., San Antonio, Ray 18,000, 2, 1 mi ne of No. 1.

BRAZORIA COUNTY—Thos. Faust et al, Damon, Fee, 640, 5, S 3, HT&B sur, 1150 ft from n and 360 ft from e line.

BASTROP COUNTY—Humble, Houston, B. Haywood Est., 150, 1, C. S. Smith sur, 200 ft from n and 150 ft from w line. Texas Co., Houston, A. Yost, 50, 7, A. Garcia sur, 150 ft from ne and 1000 ft from se line.

BROOKS COUNTY—Houston Oil Co., Houston, E. C. Lasseter, 1, B 69, Palo Blanco sur, 330 ft from s and e lines of lot 11.

CALLAHAN COUNTY—T. P. Coal & Oil Co., Ranger, C. C. Westerman, 50, 12, S 54, C. C. S. L. sur, 450 ft from w and 1150 ft from n line. Texas o., Wichita Falls, P. G. Hatchett, 40, C6, S 24, D&D Asy. sur, 199 ft from e and 150 it from s li sw¼ nw¼. Moutray Oil Co., Abilene, P. G. Hatchett, 40, 20, S 23, D&D Asy. sur, 150 ft from e and 450 ft from n li nw¼ sw¼.

CHAMBERS COUNTY—Rexal Pet. Corp., Houston, T. H. McLean, 3, 2, H. Griffith sur, 10 ft s of No. 1.

CALDWELL COUNTY—Luling O. & G. Co., San Antonio, B. T. Hinds, 84, 1, J. Hinds sur, 143 ft from n and 287 ft from e line; 2, 300 ft w of No. 1. Detex Prod. Co., Luling, J. Kiefer, 40, 1, A. Floyd sur, 150 ft from s and w lines. Humble, Houston, J. L. Northcutt, A 25 4, J. Hinds sur, 226 ft from n and 1146 ft from w line; J. L. Northcutt B 20, 1, J. Hinds sur, 226 ft from s and 150 ft from w line; 2, 150 ft from n and w lines; C. Smith, B 30, 2, J. Hinds sur, 150 ft from s and 450 ft from w line; 3, 150 ft from s and 750 ft from w line.

COLEMAN COUNTY—Stepp & Keister, Knoxville, Tenn., C. E. Shore, 100, 4, S 72, B 1, GH&H sur, 750 ft from n and 200 ft from w line. E. H. Stepp, Coleman, C. E. Shore, 80, 2, S 72, B 1, GH&H sur, 200 ft e of No. 1. Simpson, White & Pinkerton, Coleman, F. Schirmacher, 10, 2, B 6, M. Martinez sur No. 751, center of lease.

CARSON COUNTY—Mid West Exploration Co., Amarillo, Cooper, 80, 2, S 5, B 9, I&GN sur, 330 ft from w and 990 ft from s line w½ of nw¼.

COOKE COUNTY — Kewanee O&G Co., Tulsa, Okla., Lanier A., 80, 17, E. T. Ry. sur, 180 ft from n and 200 ft from w line.

CLAY COUNTY—Saxet Oil Co., Electra, Fee C, 136, 49, B 13, CN&K sur, 180 ft e of No. 9, Lot 28; 20, 220 ft sw of No. 19 in lot 28. Mid-Continent Holding Corp., Wichita Falls, Stine C, 40, 2, B 7, PCSL sur, 120 ft e of No. 1.

DUVAL COUNTY — Humble, Houston, Kohler, 26, No. 251 sur, 495 ft from e and 105 ft from n line s 251; 27, No. 399 sur, 215 ft from n and 165 ft from w line s 399. Sun Oil Co., Dallas, F. Lopez, 475, 1, S 730, BS&F sur, 15 ft from n and 2000 ft from F line S 730. Magnolia, Dallas, Hahl, 190, 3, S 78, B 9-11 sur, 300 ft s of No. 2.

FOARD COUNTY — California Co., Colorado, W. Nichols, 677, 1, S 298, B A, H&TC sur, 191 ft from n and 52 ft from e line ne¼.

FORT BEND COUNTY—Humble, Houston, Brazos Farms, 7, Wm. Little sur, 573 ft from ne and 150 ft from se line. Hamner, 5, Wm. Little sur, 621 ft from e and 92 ft from s line.

GUADALUPE COUNTY — Humble, Houston, W. H. Grifn, 148, 1, G. Allen sur, 450 ft from s and 650 ft from line.

GRAY COUNTY—Texas Co., Wichita Falls, McLarty, 400, A 6, S 2, B 1, AC&HB sur, 361 ft from s and 574 ft from w line Sec. 2. Albert McCollum, Atkins, Ark., J. F. Meers, 80, 1, S 107, B 3, I&GN sur, 330 ft from n and e lines s½ sw¼. Shell Oil Co., Wichita Falls, R. S. McConnell, 80, 3, S 174, B 3, I&GN sur, 330 ft from s and e lines of sw¼. British American O&G Co., Wichita Falls, Patton, 160, 1, S 61, B B2, H&GN sur, 330 ft from n and w lines. Texas Co., Wichita Falls, J. M. Patton, 165, 2, S 61, B B2, H&GN sur, 330 ft from n and 2866 ft from w line S 6e. Danciger O&R Co., Fort Worth, J. M. Shaw, 80, 2, S 5, B 1, ACH&B sur, 330 ft from s and e lines of e½ of sw¼. Texas Co., Wichita Falls, J. E. Williams, 480, 4, S 6, B 1, ACH&B sur, 330 ft from n and 2645 ft from w line S 6. Shell Oil Co., Dallas, R. S. McConnell, 80, 3, S 174, B 3, I&GN sur, 300 ft from s and e lines of sw¼. Nabob O&G Co., Amarillo, J. S. Morse, 80, 2, S 67, B 25, I&GN sur, 330 ft from s and w lines of e½ of sw¼.

GRAYSON COUNTY — Texas Satate Oil Co., Fort Worth, G. W. Wall, 40, 1, J. Ingram sur, 2194 ft from w and 150 ft from s line. Simpson-Fell Oil Co., Ardmore, Okla., D. R. Utiger, 80, 1, P. P. Cady sur, 330 ft from s and w lines.

GLASSCOCK COUNTY—Gibson & Johnson, Abilene, I. Dean, 160, 1, S 2, B 33, T&P sur, Twp. 5s, 660 ft from n and w lines of nw¼.

HOWARD COUNTY—A. & F. Drilling Co., Inc., Big Springs, Scrivener, 80, 1, S 12, B 33, Twp. 2s, 200 ft from s and e lines. Moody Corp., Tulsa, Okla., D. Roberts, 240, E13, S 136, B 29, W&NW sur, 990 ft from n and e lines of ne¼; E14, 990 ft from s and e lines of ne¼. McGinley-Sigler Co., Fort Worth, Barnett, 40, 1, S 92, B 29, W&NW sur, 330 ft from n and w lines. Amerada, Fort Worth, D. Roberts, 240, 10, S 128, B 29, W&NW sur, 330 ft from s and e lines of Sec. 128.

HARDIN COUNTY—Hill & Dowell, Batson, Buchanan, 4, 97, Milholme sur, 166 ft ne of No. 76. Acorn Oil Co., Beaumont, Paraffine, 4, 71, Knight sur, 74 ft from n and 2828 ft from w line.

HARRIS COUNTY — Moody Corp., Tulsa, Whitehead A, 17, 2, No. 51 J. Hamilton sur, 50 ft from e and 602 ft from s line w½ B 14.

IRION COUNTY—Banks Stocks et al. San Angelo, J. Stocks, 640, 2, S 19, B 3, H&TC sur, 1020 ft from s and w lines of sw¼.

JACK COUNTY—Panhandle Ref. Co., Wichita Falls, J. M. Box, 80, 1, I. Hughson sur, 300 ft from n and 200 ft from e line; 2, 240 ft from n and 326 ft from w line.

JEFFERSON COUNTY — Yount-Lee Oil Co., Beaumont, Gladys, 90, B 57, J. A. Veatch sur, 57 ft from s and 120 ft from e line, B 57. McFaddin, 104, P. Humphreys sur, 2030 ft from w and 982 ft from n line; 103, 577 ft from w and 988 ft from n line.

MITCHELL COUNTY — California Co., Colorado, W. L. Foster, 640 7, B 29, S 6, T&P sur, 1580 ft from w and 733 ft from s line sw¼. Westyde Inv. Co., Fort Worth, Ellwood, 160, 1, S 38, B 16, S. P. Ry. sur, 1320 ft from s and w lines of sw¼.

MOORE COUNTY — Amarillo Oil Co. & Canadian River Gas Co., Amarillo, N. H. Read, A640, 1, S 14, B B12, D&P sur, 1321 ft from n and w line of S 14. J. J. Perkins, 640, 1, S 76, B 3, G&M sur, 330 ft from n and w lines of ne¼. Skelly Oil Co., Tulsa, Okla., Byrd-Armstrong, 9, J. W. Proctor sur, 2920 ft from n and 330 ft from w line; 8, 2920 ft from n and 375 ft from w line.

REFUGIO COUNTY—Mission Drilling Co., San Antonio, J. Mitchell, 150, 1, 169 ft from n and 525 ft from w line; J. Shay, 10, 1, 200 ft from n and e lines; J. F. B. Heard, 150, 1, 731 ft from w and 1294 ft from s line; Powers, 40, 1, 193 ft from e and 235 ft from s line; T. P. Shelly, 40, 1, 205 ft from n and w lines; E. Huddleson, 2½, 1, 150 ft from s and w lines; Fox, 31, 1, 522 ft from n and 148 ft

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from w line. J. J. O'Brien, 36, 1, Blk. F, 200 ft from n and 300 ft from w line. Benedum, Trees & Morgan, Milam Bldg., San Antonio, Texas, Rooke, 100, 1, T. Mullen sur, 150 ft s of center of n line. Benedum-Trees Oil Co., San Pittsburgh, Penna., C. Heard, 100, 4, 600 ft s of No. 3. Houston Oil Co., Houston, W. J. J. Heard, 400, 12, Refugio, 150 ft from n and e linees.

STEPHENS COUNTY—Lone Star Gas Co., Dallas, R. W. Brooks, 300, 2, B 7, T&P Ry. sur, 842 ft from n and 600 ft from e line. Mid-Texas Pet. Co., Eliasville, W. W. Cunningham, 160, 9, S 1210, TE&L sur, 1300 ft e of No. 1. Herbert Oil Co. of Texas, Fort Worth, J. H. Caton, 80, 1, S 5, B 5, T&P sur, 151 ft from w and 719 ft from s line.

THROCKMORTON COUNTY — Roeser & Pendleton & Holder, Albany, R. M. Titus, 80, A4, N. Williams sur, 150 ft from s and 483 ft from e line.

WICHITA COUNTY—Riner & Bailey, Wichita Falls, J. D. Michie, 39, 4, B 8, L. Netherly sur, 314 ft e of No. 1; 5, 322 ft e of No. 4. W. H. Hammon, Wichita Falls, T. F. Mitchell, 40, 9, J. T. Lewis sur, 50 ft e of No. 6. B. W. Crowell, Wichita Falls, J. W. Snow, 60, 1, B 3, HT&B sur, 150 ft from w and 1407 ft from s line. Rubsam & Hunter et al, Wichita Falls, W. D. McClure, 40, 6, B 5, GC&SF sur, 300 ft n of No. 5. Hi Land Oil Co. et al, Wichita Falls, Piper, 30, 4, B 11, J. T. Lewis sur, 300 ft s of No. 1. Bullington, Lee, Wichita Falls, Jennings, 50, 4, S 12, HT&B sur, 717 ft from s and e lines. Minntex Oil Corp., Wichita Falls, J. E. Roller, 40, J. Scott sur. Atlas Prod. Co., Burkburnett, O. L. Clark, 100, 5, O. Farris sur, 350 ft from s and 300 ft sw of No. 2. Golding & Cochran, Wichita Falls, J. & J. Waggoner, A, 80, 3, S 23, H. George sur, 300 ft w of No. 2.

WILBARGER COUNTY—Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner, N, 80, 2, S 17, B 4, H&TC sur, 525 ft from n and 825 ft from w line n½ ne¼. Consolidated Oil Co., Wichita Falls, W. T. Waggoner, 0, 80, 2, S 40, MEP&P sur, 340 ft n No. 1, n½ of nw¼. C. P. Burton, Wichita Falls, W. T. Waggoner, 80, 1, S 8, B 4, H&TC sur, 150 ft from n and e lines of w½ of nw¼; W. T. Waggoner, L, 80, 13, S 40, MEP&P sur, 150 ft from n and e lines. Patterson Drilling Co., Fort Worth, W. T. Waggoner, 200, 1, S 1, B 4, H&TC sur, 600 ft from w and 200 ft from s line. Shappell Oil Co., Wichita Falls, Smith, 500, 1, S 18, B 14, H&TC sur, 1300 ft from w and 200 ft from s line, S 18. Jno. O'Neil, Wichita Falls, Waggoner, 40, 1, S 40, B 4, MEP&P sur, 150 ft from s and w lines. Phillips Pet. Corp., Bartlesville, Okla., W. T. Waggoner, NN, 198, 22, S 42, B 4, H&TC sur, 800 ft w of No. 21.

WINKLE RCOUNTY—Marland Prod. Co., Ponca City, Okla., T. Morton, 40, 2, S 27, B B12, 330 ft from e and 990 ft from s line. Texas Canadian Oil Co., San Angelo, Texas, Kloh, 160, 1, S 35, B 46, T&P sur, 1320 ft from s and w lines of sw¼. Tidal Oil Co., Fort Worth, W. F. Scarborough, 80, 1, S 1, B C22, 300 ft from n and 326 ft from w line se¼ of se¼. Humble, Wichita Falls, T. G. Hendrick, C, 320, C 12, S 10, B B12, 1325 ft from w and 1980 ft from s line.

WHEELER COUNTY—Lone Star Gas Co., Dallas, D. B. Lamb 20, 1, S 91, B 17, H&GN sur, 330 ft from n and 662 ft from e line s½ ne¼ sw¼. I. E. Stauffer 160, 1, S 102, B 23, H&GN sur, 662 ft from s and w lines of sw¼.

WASHINGTON COUNTY—Butler-Calhoun Co., Corsicana, F. W. Schuerenberg 50, 1, S. M. Williams sur, 75 ft from s and w lines.

WARD COUNTY—Atlantic & Delmar Oil Co., Dallas, S. F. Hayzlett 480, 2, S 17, B 5, H&TC sur, 2490 ft from s and e lines of S 17.

YOUNG COUNTY — Bridwell Oil Co., Wichita Falls, F. M. Cullers 40, 1, B 25, Y.C.S. L. sur, 150 ft from n and w lines of Blk 25. W. S. White, Fee 115, 2, No. 258, 1, 150 ft from e and 933 ft from n line. L. A. Edmondson, Loving, C. W. Johnson 40, 1, B 3, E. W. Sargent sur, 150 ft from n and 750 ft from e line. Riggs & Oliphant, Graham, J. P. McKinley 200, 29, 1489, TE&L sur, 450 ft from n and 1680 ft from e line. W. L. Hawkins, Wichita Falls, J. C. Owen 160, 2, BBB&C sur, 300 ft s of No. 1. C. A. Pennell, Loving, J. W. Cox 40, 1, Y.C.S.L sur, 450 ft from w and 200 ft from s line. Riggs & Oliphant, Graham, J. P. McKinley 200, 28, 1489, TE&L sur, 1380 ft from e and 450 ft from n line. L. G. Bradstreet Co., Wichita Falls, L. T. Richardson 59, 1, J. G. Maupin sur, 1674 ft from n and 1185 ft from e line. Mid-Texas Oil Co., Oklahoma City, R. J. Calvin 30, 1, A. Rohus sur, 4, 450 ft from n and 150 ft from e line. M. & V. Oil Co., Wichita Falls, F. Hunt 50, 1, 160, TE&L sur, 150 ft from n and e lines. C. W. Boller, Wichita Falls, J. K. Thomas 50, 2 155, TE&L sur, 300 ft e of No. 1. Texas Co., Wichita Falls, G. P. Stewart, B 110, 2, BBB&C sur, 225 ft from n and 150 ft from e line. Jno. L. McMeans, Fort Worth, E. C. Keith 100, 1, 268, TE&L sur, 150 ft from w and 450 ft from s line of sw¼. Continental Oil Company, Wichita Falls, R. Campbell B 200, B 9, 1390, TE&L sur, 400 ft e of No. 7. J. T. Hutchings, Olney, W. J. McClure 19, 1, 221, TE&L sur, 358 ft from nw and 150 ft from sw line. Wise & Jackson, Graham, R. J. Calvin 100, 7, A. Rohus sur, 300 ft e of No. 2; 8, same sur, 300 ft e of No. 3. S. F. Kimbell, Ardmore, Okla., F. Dyer, 4, W. W. Stroud sur, 300 ft n of No. 3. L. G. Bradstreet Co., Wichita Falls, L. T. Richardson 103, 1 B, J. G. Maupin sur, 1647 ft from n and 1420 ft from e line. T. T. Richardson 103, 1 A, J. G. Maupin sur, 1756 ft from n and 1701 ft from e line. Cunningham & Bratcher, Loving, Edwards 60, 8, S. Tynes sur, 300 ft n of No. 1. Continental Oil Co., Wichita Falls, R. Campbell B 200, 8B, 1390, TE&L sur, 400 ft e of No. 7. Shappell Oil Co., Wichita Falls, D. Garrett 32, 6, 1487, TE&L sur, 300 ft n of No. 5.

ZAPATA COUNTY—National Oil Co. of Texas, San Antonio, J. W. Fullerton, 1 S 7, B 13, Borrego sur, sw corner of lease.

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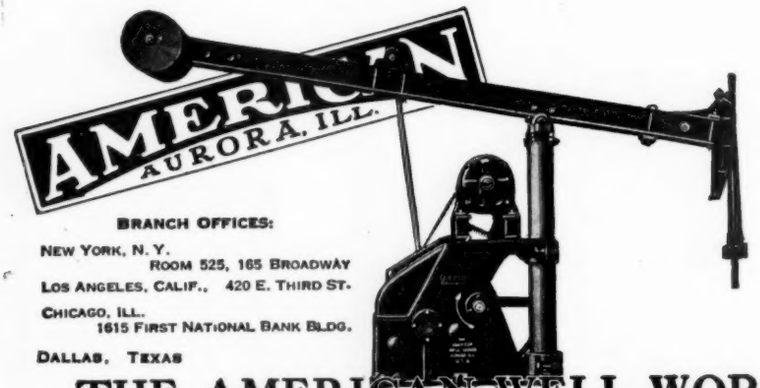

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WILDCATS FROM ALL SECTIONS

NORTHERN CALIFORNIA

KERN COUNTY

BAKERSFIELD—Taft Well Drlg. Co.'s Delfine 1, 2-30-27, building rig.

BELRIDGE—Calkern Oil Co.'s 1, 18-28-22, lcn.

BENA DISTRICT—Elmer Oil Co.'s 1, 15-30-30, dr hard sand 2135 ft.

BUTTONWILLOW—Don C. Aldridge's 1, 12-28-23, material. Doheny-Stone Oil Co.'s Salisbury 1, susp 4750 ft. Richfield Oil Co.'s Redding 1, 36-27-23, 6454 ft, prep to set 8¼-in cas for protection.

GOULD HILLS—Elmer Oil Co.'s 1, 2-29-20, dr brown shale 2580 ft. J. H. Kennedy's 1, 5-29-21, rigging rotary. Ozena Oil Co.'s Kendon 1, 27-29-21, rig.

KERN RIVER—Gatton & Gould's 1, 1185 ft trying to get by fish. Richfield Oil Co.'s Boston 1, 20-28-28, 4361 ft, no showings below upper Kern River sands, prep to drill to Walker. Shell Oil Co.'s Ansolabehere 1, 5-29-27, 3765 ft. 11¾-in cas at 3725 ft stdg cmt.

McFARLAND—General Pet. Corp.'s K L 1, 25-26-25, dr sandy shale 5001 ft. The Texas Co.'s Aldridge 1, 4-30-22, abn 5016 ft. Ventura-Pacific Oil Co.'s 1, 18-29-22, 3375 ft, fulling 4¾-in cas.

ROSEDALE—Elmer Oil Co.'s 1, dr hard sandy shale 2735 ft.

SHALE HILLS—Day Oil Co.'s 1A, 1-27-18, dr hard sand 469 ft. Wm. Gilbert's 1, 35-26-18, 750 ft, prep to deepen.

SAN EMIDIO—Union Oil Co.'s KCL 2, 5-10-21, reaming 3238 ft.

TEMBLOR HILLS—Dollar Oil Co.'s Phelps 1, 18-31-22, fdn. Geo. F. Getty's Phelps 1, dr hard shale 2190 ft. Union Oil Co.'s W. P. 1, 27-32-23, dr brown shale 4925 ft. Williams 1, bldg rig, Sec. 23-32-23.

SANTA BARBARA COUNTY

BETTERAVIA—Fred Garliepp's 1, 20-10-35, bldg roads. Shell Oil Co.'s Union Sugar A-3, 30-10-35, fsh 540 ft. Union Sugar A-4, 36-10-35, rigged up.

BUELL CANYON—Union Oil Co.'s Buell 1, dr hard brown flinty shale, 662 ft.

CARPENTERIA — Continental Oil Co.'s Kitty C. Ballard 1, dr brown shale 2490 ft.

GOLETA—F. G. Anderson's Langman 1, 10-4-28, dr brown shale 4090 ft. Elwood Cons. Oil Co.'s Rekar 1, 8-4-29, susp 3428 ft. General Pet. Corp.'s More 1, 21-4-28, dr hard brown shale 3231 ft. Padre Oil Co.'s Dos Pueblos 1, 8-4-29, dr brown shale 2840 ft. Petroleum Securities Corp.'s Bishop 1, dr sandy shale 1420 ft. Southwest Prod. Co.'s Pickett 1, 2-4-28, dr red shale 3100 ft.

LOMPOC—Standard Oil Co.'s Schyvers 1, abn 2660 ft.

NAPLES—Pacific-Western Wiley Ranch 1, dr 185 ft.

ORELLA—Shell Oil Co.'s Rutherford 1, 36-5-31, dr sandy shale 3660 ft.

POINT CONCEPCION—Standard Oil Co.'s Gerber 1, sd 2428 ft. Western-Gulf Oil Co.'s Hollister 1, dr shale 2600 ft.

SANTA BARBARA—Channel Oil & Dev. Co.'s 1, 29-4-27, susp 6303 ft. Fellowship 1, 29-4-27, co 510 ft.

SANTA MARIA—Keystone Oil Co.'s Paderewski 1, 33-10-34, rigged up. System Oil Co.'s Bradley 1, 36-10-34, dr hard sand 1960 ft.

SUMMERLAND—American Oil Developers' SubMarine 1, susp 790 ft. Geo. F. Getty's Becker 1, 22-4-26, dr hard sand and shale 4796 ft. Lincoln Drlg. Co.'s Williams 1, 32-4-16, fdn. Shell Oil Co.'s Ralph Permit 1, building roads.

SURF—Keystone Pet. Co.'s True Ranch 1, bldg roads.

VENTURA COUNTY

VENTURA AVENUE — California-Ventura Oil Co.'s LaCrosse 1, dr shell 1417 ft. Federal Oil Co.'s Sexton 1, dr hard sandy shale 3420 ft.

RED MOUNTAIN—E. J. Miley's Casitas 2A, 7-3-23, dr hard sand and shale 1347 ft. Oakgrove 1, 11-3-24, grade.

CONEJO—American Oil Co.'s 1, 33-2-20, dr volcanics 1152 ft. Triunfo Oil Co.'s 1, 24-1-19, carrying 8¼-in cas.

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

FILLMORE—Frank Oil Co.'s 1, 35-4-20, co 1685 ft. Federal Oil Co.'s Elkins 1, 5-3-19, pumping 10 bbls oil 75 bbls water 3384 ft. Elkins 2, 5-3-19, grade.

LOCKWOOD VALLEY—Lockwood Valley Oil Co.'s 1, 28-8-21, rig.

MUD CREEK CANYON—Superior Oil Co.'s Kirtlan 1, 14-4-21, dr hard sand 260 ft.

OJAI—Continental Oil Co.'s Fox 1M, susp 3767 ft, 21-4-22 rig.

PIRU—Bolsa Chica Oil Co.'s Snow 1, 4-4-18, abn. Snow 1A, 4-4-18, rig. Pacific-Western Oil Co.'s Tehmescal 5, 3-4-28, dr hard sand 3796 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, fsh 1150 ft. California-Republic Oil Co.'s 1, 24-2-21, lcn. Empire Oil Co.'s 4, 13-4-21, dr gray shale 790 ft. San Pedro-Pt. Fermin Oil Co.'s Kellerman 1, 13-4-21, co 872 ft.

SATICOY—Standard Oil Co.'s Citrus 5, 10-2-22, dr brown shale 6279 ft.

SIMI—Shell Oil Co.'s Marr 1, 31-3-17, redr 1825 ft.

MISCELLANEOUS

FRESNO COUNTY

COALINGA DISTRICT—Section 30 Oil Co.'s 1, 30-19-15, pulled 10-in cas and ran 8¼-in 815 ft.

JACALITOS HILLS—Currency Pet. Co.'s 1, 28-21-14, dr blue shale 2080 ft, 90 ft rigging up.

FRESNO DISTRICT — Fresno-Madera Oil Co.'s 1, 18-12-21, fsh 4200 ft.

KERMAN DISTRICT—Oceanside Oil Co.'s 1, 33-22-16, rigging up 400 ft.

COALINGA—Pet. Securities Co.'s Gatchell 1, 20-20-16, fdn. Ladd 1, 28-20-16, rig.

KRAYENHAGEN HILLS — Thomas Pet. Co.'s 1, 33-22-17, rep rig.

OIL CITY—Paragon Oil Co.'s 19, 17-19-15, rigged up.

KINGS COUNTY

MENDOCINO—Twin State Oil Co.'s Soldani 1, bldg rig.

MONTEREY—W. R. Brown's 1, 29-23-14, 40 ft, waiting on 20-inch cas. C. H. Braden's 1, 19-23-15, rigging portable outfit. Marland Oil Co.'s Nacimiento 1, 32-24-11, dr sticky shale 5570 ft. Shell Oil Co.'s Dudley 1, 15-22-9, coring.

POLE CANYON—Union Oil Co.'s Paige 1, 8-22-8, rigging up.

SAN LUIS OBISPO COUNTY—

TEMBLOR HILLS — Keefe-Morrison's Phelps 1, lost circulation 1733 ft. Thos. H. Purman's 1, 12-32-22, sdtrk bit 2640 ft. Western Drlg. & Prod. Co.'s 1, 2-32-22, susp 300 ft. Midwest O. & R. Co.'s Porter 1, rig, Sec 34-31-15. Painted Hills Oil Co.'s Pecho 1, 34-30-10, co 1990 ft. Paso Robles Oil Synd.'s Emerick 1, 27-27-11, dr brown shale 715 ft. Premo Oil Co.'s 1, 5-32-13, rig. Union Oil Co.'s Russ 1, dr bard brown shale 3620 ft. Chandler 1, 12-32-15, dr hard brown shale 3481 ft.

TULARE COUNTY—Bruce Frame's 1, 8-23-26, rig.

SOUTHERN CALIFORNIA

ANTELOPE VALLEY—Roy M. Christenson's No. 1, dr hard sand 970 ft.

BELVEDERE—W. H. Taylor's Hellman 1, rigging rotary.

CALABASAS—Pugh-Miller Drlg. Co.'s Colyear 1, dr hard sandy shale 2525 ft.

CHATSWORTH—Russell Pet. Co.'s Joughin 1, 1490 ft, 10-in cas at 1490 ft, sd recmt.

CLEARWATER—The Texas Co.'s Montana Land 1, lcn.

FULLERTON—Shell Oil Co.'s Bastanchury 1, dr hard sand 1549 ft.

HAWTHORNE—Standard Oil Co.'s Freeman 1, 5-3-14, rmg 4699 ft.

INGLEWOOD — California-Eastern's Pollard 1, 4522 ft, 50 bbls oil. Para-Cal. Oil Co.'s 1, rigging rotary. Petroleum Securities' Parent 1, dr sand and shale 3210 ft. Max Pray's 1, dr out cmt, testing 3815 ft. St. Patricio Oil Co.'s Connolly 1, 1020 ft 18-in cmt at 1020 ft, sd cmt. John A. Woodward's 1, dr sandy shale, streaks oil sand, 4660 ft.

MANHATTAN BEACH—Western Drlg. & Producing Co.'s 1, susp 5033 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s Jepsen 1, preparing to resume operations 3926 ft.

NEWHALL—P. B. Anderson's 1, 1-3-16, dr brown shale 225 ft. Southern California Prod. Co.'s Needham 1, rig.

NEWPORT—Mesa Pet. Corp.'s B & A 1, 16-6-10, dr hard sand 4320 ft. Western Drlg. & Prod. Co.'s 1, 18-6-10, susp 4461 ft; Meyer 1, 18-6-10, susp 2260 ft.

PIRU DISTRICT — California-Eastern's Hasley Canyon 1, susp 3212 ft. Coast Line Oil Co.'s Mazie 1, waiting on tools 365 ft. Pico Dome Oil Co.'s 1, 14-3n-16w, dr hard sand 375 ft.

POMONA—Pomona Oil Assn.'s 1, 32-1-8, dr hard sand 1112 ft.

PUENTE HILLS—Brea Canyon Dev. Co.'s Bierd 1, rigging rotary. R. C. Rucker's Grazide 1, 27-2-10, dr brown shale 860 ft.

REDONDO BEACH—Allied Pet. Co.'s Lincoln 1, 28-3-14, dr shale, streaks sand 4995 ft. Petroleum Securities' Schwuchow 1, dr brown shale and gray sand 5362 ft.

RICHFIELD—Western Drlg. & Prod. Co.'s Day 1, dr hard sand 3812 ft.

ROSECRANS — Burlingame Pet. Corp.'s Hamm 1, dr brown shale, gray sand 2125 ft.

VENICE—Ohio Oil Co.'s Del Dey Water Co., 22-2s-15w, dr shale, streaks sand 6200 ft.

WHITTIER—R. W. Jackson's Flory 1, 1446 ft, reaming to set 8¼-in cas.

RIVERSIDE—L. R. Clark's Banning 1, 2250 ft, fsh for dr pipe. Hall Pet. Co's Watt 1, 23-7-3, 931 ft susp. Memet Pet. Co.'s Ward 1, dr gray sand 3243 ft. Spindletop Oil Co.'s 1, 25-7-10, susp 3458 ft. Trabuca Oil Co.'s 1, dr hard gray sand 3815 ft.

SAN BERNARDINO COUNTY—Urmi Oil Co.'s Schuh-Zellers 1, 31-2s-8w, rigged up. Mahala Oil & Gas Co.'s 1, 13-3-8, 4010 ft, sdtkg 6¼-in cas. Western Pacific Oil Co.'s 1, 4-10n-4e, swabbing, fluid level at 3130 ft.

SAN DIEGO—S. S. Turner's Baler 1, 1972 ft, swabbing water, no oil.

IMPERIAL COUNTY—Imperial Valley Oil Co.'s 1, 32-11-10, temp susp 2990 ft.

OKLAHOMA

GRANT COUNTY—T 26n, R 3w, Sec. 24, Consolidated Gas Ut. Co. et al's Conneil 1, nw cor, hfw, 4435 ft, 4670 ft td drlg plugs.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, dr 2680 ft.

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros.' Forbes 1, ne cor se nw nw, sd 310 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent & Nat'l Union's McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft, litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et al's 1, sec sw, show gas 5003-19 ft, hfw 5005-19 ft, dr 5195 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22,

XUM

MORE HOLE AT LESS COST!

Note that straight water courses lead direct to cutting edges. Maximum cooling effect. Cuttings rapidly broken up and washed away in solution. This means NO CHOKING UP.

The blades are formed concavely favoring sharp cutting edges for both bottom and side of hole. Attained by hard facing, permitting wear on back to retain cutting edges. Hence the well known feature of the Appleman Gumbo Bit—SELF-SHARPENING

(Patent Applied For)

Specially designed cutting edges give SPEED. A rapid mud mixer. Less spudding required. Cuts side wall as it drills. Well prepared side wall. Holds gauge longer. Reaming rarely necessary.

Records show that this bit makes an average of 60% to 100% more hole in the same given time in all formations excepting rock. Less labor. Less expense.

Names of prominent users will be mailed upon written request.

WRITE FOR COMPLETE INFORMATION

B. K. APPLEMAN

BEAUMONT, TEXAS

Cowden's Vollmer 2, nec se ne sw, lost tools, sd 5640 ft.

WOODWARD COUNTY—T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18, Miller et al's Copenhaver 1, nwc, spudded and sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, Washoma Oil Co.'s Acre 1, swc ne, rig.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, dr 4830 ft.

WOODWARD COUNTY—T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, dr 3690 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 2, John Farran's Belva No. 2, csl sw se, dr 1387 ft.

MAJOR COUNTY—T 23n, R 16w, Sec. 4, Wilson et al's Creech 1, nec sw, sd 510 ft.

WOODWARD COUNTY—T 21n, R 21w, Sec. 25, Sharon's Elmore 1, swc sd, 3025 ft, rig down. T 21n, R 19w, Sec. 15, Burgoyne Bros.' Marklin 1, swc se ne, sd 1910 ft.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al's Horton 1, c ne ne, spudded and sd.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, 12-nich at 1365 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckleby & McCoy's Perfect 1, nec sd 4500 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy & Consolidated Drlg. Co.'s Quier 1, sec sw, sd 3970 ft.

KINGFISHER COUNTY — T 16n, R 6w, Sec. 27, Crawford &McKe nna's Sturgeon 1, nec sw, sd 4895 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears' Piatt 1, swc nw, sd 3223 ft.

CIMARRON COUNTY—T 5n, R 5 E.C.M., Sec. 22, Magnolia's School Land 1, c se ne, sd 3315 ft.

TEXAS COUNTY—T 1n, R 15 E.C.M., Sec. 25, Skaer et al's Hitch 1, nwc, dr 500 ft.

OSAGE COUNTY—T 26n, R 7e, Sec. 13, Wrightsman Pet. Co.'s 1, sec nw, dr 675 ft. T 26n, R 9e, Sec. 20, Wrightsman Pet. Co.'s 1, nwc ne nw nw, dr 1650 ft.

CREEK COUNTY—T 19n, R 8e, Sec. 35, Murphy Oil Co.'s Lapham 1, swc ne sw, dr 1075 ft.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, dr 4362 ft. T 16n, R 5e, Sec. 2, L. B. Wheeler et al's Wolfe 1, nwc ne sw, td 4124 ft dry and aband. Sec. 19, T. P. C. & O. Co.'s Seabo 1, nwc, fsh tools 4538 ft. T 16n, R 6e, Sec. 19, Flynn & Morgan's Finely 1, swc, dr 1605 ft. T 15n, R 5e, Sec. 31, I. T. I. O. Co.'s Crane 1, nec sw sw, water 4814-4847 ft, 4862 ft td, dry and aband. T 14n, R 6e, Sec. 33, Magnolia Pet. Co.'s Mitchell 1, nec, 3005 ft td, co. T 12n, R 3e, Sec. 29, Phillips Petroleum Co.'s Roberson 1, sec nw, rig.

OKFUSKEE COUNTY—T 12n, R 7e, Sec. 29, Barnsdall's Soweka 1, nec sw, dr 4715 ft.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURGH COUNTY — T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, 3M gas 1325-90 ft, 2M gas 1890-95 ft, 3M gas 4472-4525 ft, 3M gas 4613-35 ft, Wilcox 5443 to 5496 ft, small show oil 5446-70 ft, 1M gas at 5464 and 5480 ft, dr 5516 ft.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 2692 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O&G Co.'s Murray 1, swc, 1½ M gas 2518-30 ft, dr 3840 ft.

OKLAHOMA COUNTY—T 12n, R 3w, Sec. 15, Cromwell's Thompson 1, swc ne ne, 7182 ft, dry and abandoned. T 12n, R 2w, Sec. 30, Magnolia's Noble 1, nwc sw sw, dr 5030 ft. T 12n, R 1w, Sec. 19, Mid-Kansas & Ramsey's Trosper 1, nec nw, dr 3707 ft.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 6, Superior et al's Carolina 1, sec, lcn.

SEMINOLE COUNTY—T 10n, R 7e, Sec. 20, Gypsy's Harjo 1, nwc ne ne, dr 2315 ft.

POTTAWATOMIE COUNTY—T 8n, R 5e, Sec. 33, Phillips & Fuhrman's Raper 1, swc se, dr 2160 ft.

SEMINOLE COUNTY—T 8n, R 7e, Sec. 4, Magnolia Pet. Co.'s Reed 1, nec sw, dr 3325 ft.

HUGHES COUNTY—T 8n, R 11e, Sec. 25, McGee Bros.' Smith 1, sec sw, dr 1150 ft.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co.'s Vandeveer 1, nec nw sw, sd 3120 ft.

SEMINOLE COUNTY—T 6n, R 5e, Sec. 11, McCulloch's Powell 1, nwc dr 3645 ft. T 6n, R 7e, Sec. 9, Gypsy Oil Co.'s Thomas 1, sec nw, dr 5266 ft. Sec. 34, Magnolia's Harjo 1, nec se, 4600 ft, cemtg 8-inch csg.

HUGHES COUNTY—T 6n, R 8e, Sec. 5, Shell et al's Tiger 1, sec ne, dr 463 9ft, 3500 ft of water.

SEMINOLE COUNTY—T 6n, R 8e, Sec. 9, The Texas Co.'s Bryant 1, sec ne sw, sand 2650-60 ft, show oil, shut down. T 5n, R 7e, Sec. 3, I. T. I. O. et al's Factor 1, swc ne se, dr 3300 ft.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, sd 3910 ft.

PONTOTOC COUNTY—T 4n, R 8e, Sec. 23, Independent's Hampton 1, nec, ur 10-inch at 2600 ft.

PITTSBURGH COUNTY — T 4n R 12e, Sec. 32, Kerr & Key's Tall 1, c nw nw, fsh 1805 ft.

COAL COUNTY—T 2n, R 8e, Sec. 6, J. S. Cosden's Richardson 1, nwc ne ne, 1855 ft fsh 12-inch. Sec. 7, McGinley & Sigler's Wiltsey 1, nwc se se, rig on ground. Sec. 10, E. W. Whitney's Miller 1, sec ne, sd 202 ft. T 1n, R 11e, Sec. 10, I. T. I. O.'s Cooke 1-A, sec sw nw, dr 7155 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, c se, sd 100 ft.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone's Williams 1, c sw, lcn. T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nw ne, sd 700 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, dr 100 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 30, Benedum-Trees Oil Co.'s Rogers 1, swc, 8-inch at 2340 ft. T 8n, R 22w, Sec. 20, Carson et al's Denby 1, swc se ne, fsh 1507 ft.

GREER COUNTY—T 6n, R 24w, Sec. 17, I. T. I. O. et al's Fee 1, c ne, dr 1603 ft.

CADDO COUNTY—T 6n, R 10w, Sec. 26, English Drlg Co.'s Gardner 1, nwc sw, sd 3465 ft.

HARMON COUNTY—T 4n, R 26w, Sec. 8, Smythe et al's Shaw 1, c ne ne, rig.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Houseman et al's Northington 1, nec, sd 2020 ft.

TILLMAN COUNTY—T 1n, R 17w, Sec. 13, Allen Bros.' Howell 1, nwc se, show oil 599 ft, 8-inch at 826 ft. T 1s, R 18w, Sec. 25, Wirt Franklin's Zweig 1, c nw, dr 2842 ft.

COTTON COUNTY—T 1s, R 11w, Sec. 24, Bridwell et al's Crow 1, sec sw sw, sd 1626 ft.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair's 1, sec sw se, sd 2535 ft.

STEPHENS COUNTY—T 3s, R 7w, Sec. 4, Ellis Drlg. Co.'s Yates 1, swc ne, dr 982 ft. T 3s, R 6w, Sec. 4, Carter and others Woolsey 1, sec sw ne, lcn.

TILLMAN COUNTY—T 4s, R 14w, Sec. 16, Ridgeway et al's Barnes 1, nwc ne, lcn.

COTTON COUNTY—T 4s, R 9w, Sec. 31, Amerada Pet. Corp., De Lana 1, sec nw nw, dr 1965 ft, water.

JEFFERSON COUNTY—T 5s, R 8w, Sec. 16, Pearce & Brown's School 1, sec ne nw, dr 50 ft. T 5s, R 7w, Sec. 35, Amerada Pet. et al's Majors 1, sec nw nw, lcn.

GARVIN COUNTY—T 3n, R 3w, Sec. 36, Gilcrease-Douglas Oil Co.'s Barnett 1, sec nw ne, sd 4270 ft.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, sd 2275 ft.

JOHNSTON COUNTY—T 1s, R 7e, Sec. 29, Smith-Kinsley's Lane 1, sec nw, dr 2090 ft.

CARTER COUNTY—T 4s, R 1e, Sec. 32, Leonard Woodruff's Zellner 1, nwc sw ne, dr 250 ft. T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co.'s Anderson 1, sec ne se, sd 420 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. G. Endicott et al's Craige 1, c nw ne, dr 1390 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Phillips, Prairie & Slick's Sudik 1, c ne ne, dr 5790 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, Slick, Bailey & Prairie's Wilkins 1, c ne se, 5130 ft, dry and aband.

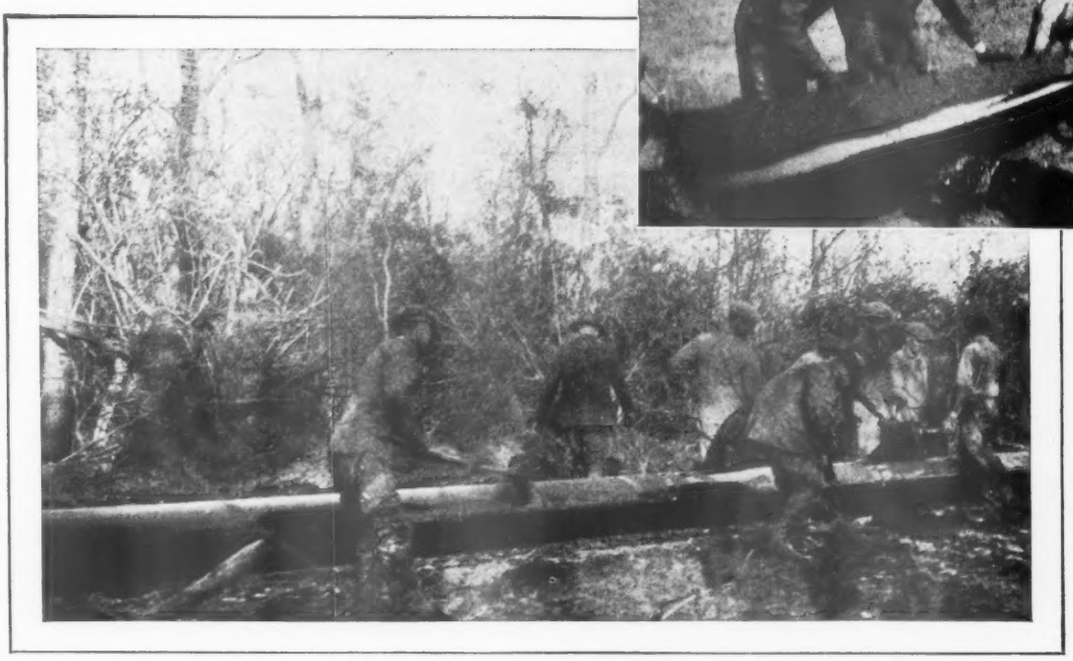
WOODWARD COUNTY — T 23n, R 17w, Sec. 23, Transcontinental & Prairie's Wilbur 1, nec, dr 4025 ft.

OKFUSKEE COUNTY—T 11n, R 9e, Sec. 2, Producers & Refiners Palmer 1, nwc ne, dr 3981 ft.

XUM

Out of the reach of corrosion, now!

ARMORED, underground



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Carey ASBESTOS PIPE LINE FELT

Say you saw it in The OIL WEEKLY

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
JOHNSON COUNTY—		
Ark. Nat. Gas Corp., Bynum 2, 12-10-24	*	3125
UNION COUNTY—		
Grimes Bros., Hill 2, 7-18-14	20	2260
J. O. Moore, Tr., Union Sawmill 1, 11-18-12	*	3304

ASHLEY COUNTY—Atlantic O. P. Co.'s Bledsoe 1, 20-15-7, dr 2836 ft.

BRADLEY COUNTY—Phillips Pet. Co. et al's J. W. Kline 1, 28-16-12, dr rock 1175 ft.

CALHOUN COUNTY—Phillips Pet. Cofl et al's Eagle Mills Lbr. Co. 1, 11-16-12, lcn.

CLARK COUNTY — Wm. Henry, Tr.'s, Clark 1, 34-9-21, sd 1385 ft.

COLUMBIA COUNTY—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-22, sd wo 2847 ft. Helena O. & G. Co.'s Pickler 1, 19-19,-22, sd 2647 ft. Dr. Bush et al's Jones 1, 5-17-18, cemtd 12½-inch cas 124 ft. T. R. Brown et al's Spencer 1, 18-18-22, rig up. Jacob Laskin et al's Dennis 1, 11-20-23, dr 40 ft.

CRAWFORD COUNTY — Industrial O&G Co.'s Brownlee 2, 22-9-31, lcn.

DREW COUNTY—McClintock & Goedke's Ogle 1, 35-13-5, trying to clean, td 2530 ft.

FAULKNER COUNTY—Gold Creek O&G Co.'s Stermer 1, 17-4-13, temp abn, td 3462 ft.

FRANKLIN COUNTY — Ozark Nat. Gas Co.'s McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3-19w, trying to get back to bottom, td 3005 ft. Chaywood Oil Co.'s Malvern Lbr. Co. 1, 17-2-17, wo 1668 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, sd 1400 ft.

JOHNSON COUNTY — Ark. Nat. Gas Corp.'s Bynum 2, 12-10-24, dry abn, td 3125 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 21-12-13w, sd 2941 ft.

LOGAN COUNTY — Ark. La. Pipe Line Co.'s Hanna 1, 26-7-23, cleaning out to 2285 ft.

OUACHITA COUNTY — Lohman & Le-Grand's Fogle 1, 18-14-16, dk. Flaucher et al's Bucks 1, 7-15-17, sd wo 2475 ft. Timberlake et al's Wright 1, 25-14-18, coring 2714 ft. Ark. Drilling Co.'s Crowley 1, 27-15-18, dr 2758 ft.

ST. FRANCIS COUNTY—W. F. Harris' Halbert 1, 32-4-4, lcn.

UNION COUNTY — Johnston-Gummer Oil Co.'s Cargile 1, 4-18-13, bldg dk. Wesson et al's Booth 1, 12-15-19, trying to work back to bottom, td 2227 ft. Foster et al's Murphy Land Co. 1, 22-17-17, sd 1400 ft. J. O. Moore Tr.'s, Union Sawmill 1, 11-18-12, dry abn, td 3304 ft. J. P. Hawkins etal 's Goodwin 1, 36-17-16, dk. Grimes Bros.' Hill 2, 7-18-14, pumping 20 bbls oil 30 bbls sw, td 2263 ft. W. M. Coates, Tr.'s, McDuffie 1, 32-19-16, tested 22 joints sw thru ds 2846-56 ft, r to 2856 ft. Gulf Ref. Co.'s Gaddy 2, 30-17-14, coring red gumbo 3591 ft. Rosa L. Cook 1, 1-18-15, arr to abn as dry hole, td 3763 ft.

MISSISSIPPI

ALCORN COUNTY — Alcorn Pet. Co.'s Matthews 1, 14-2-7, sd.

CHICKASAW COUNTY—Hightower & Golson's Flemming 1, 20-13-13, arr resume dr 1100 ft.

CLAIBORNE COUNTY—Ben White's Old Hen 1, 36-10-4, rebldg dk, td 1970 ft.

HINDS COUNTY—Mrs. Ella Rawls Reeder's State Land 1, 25-6-1, sd 2825 ft. Hennessey et al's Riverside 1, 23-16-5, sd wo 1050 ft.

LEE COUNTY — Lee County Pet. Co.'s Hickman 1, 12-8-6, sd 920 ft.

LINCOLN COUNTY (Brookhaven Dist.)—Miss. Land & Oil Co.'s Pat Case 1, 21-8-6, sd 30 ft.

LAUDERDALE COUNTY (Meridian Dist.)—Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd 1570 ft. Lauderdale O&G Co.'s Lackey 1, 2-7-16, rig up. J. R. Smith Oil Co.'s Craig 1, 2-6-14, dk.

MONROE COUNTY (Amory Dist.)—Amory Pet. Co.'s Hall 1, 8-13-17, fsh cable 3045 ft. Amory Dev. Co.'s Bourland 1, 2-13-19, sd tools in hole, td 2500 ft. Amory Nat. Gas Co.'s Carter 1, 7-13-17, set 6-inch cas 2374 ft, td 2380 ft. Ark. Nat. Gas Corp.'s Rye 1, 22-15-17, fsh tools and 5 3/16-inch cas 3376 ft. Park Bowser et al's Cowart 1, 2-12-19, arr resume dr with drive pipe.

RANKIN COUNTY—Lion O&R Co.'s Misterfeldt 1, 2-4-1, dr 4023 ft. (Ohio Oil Co., Ark. Nat. Gas Corp., Amerada Pet. Co. and Carter et al, dr test with Lion).

WARREN COUNTY (Vicksburg Dist.)—Henderson et al's Dornbusch 1, 8-18-5, sp.

YALABOUSHA COUNTY (Water Valley Dist.)—Philp Bros.' James 1, 20-11-5w, sd 2482 ft.

ALABAMA

LAMAR COUNTY — Briggs & Knapp's Wefel 1, 25-12-14, sd repr engine 400 ft.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd wait ur & pipe, td 535 ft. Hobson Bros. 1, 9-8-2, sd waiting water pipe, td 320 ft.

CHOCTAW COUNTY — Robinson-Greer's Long Bell Lbr. Co. 1, 28-10-4, arr to abn in sand and shale, td 4020 ft.

TENNESSEE

DECATUR COUNTY—Standard Oil Co. of La.'s Wyatt 1, fsh 1210 ft. Chester County O. & G. Co.'s Montgomery 1, arr re-set 6-inch cas 1040 ft.

EAST TEXAS

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn, td 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, sd 1920 ft.

HARRISON COUNTY — McRitchie et al's Dean 1, Craft sur, tested dry 1885 ft, arr to deepen.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, sd wo 1863 ft. Harper's Garland 1, Jos. Wagley sur, arr resume dr 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd wo 1440 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3004 ft. Gulf Ref. Co.'s Caraway 1, Patterson sur, dr grey and brown lime ,streaks blue shale, 4730 ft.

NORTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Standard Oil Co. of La., W. K. Henderson 1, 7-19-14	*	2427
Root Refineries, Liebman 1, 12-19-15	*	2588
TENSAS PARISH—		
Enochs et al, Curry 1, 39-11-12e	*	3765
SABINE PARISH—		
R. L. Gay, Tr., Bowman-Hicks 2, (new series) 14-7-14	*	3621
Bowman-Hicks 3, 14-7-14	15	2178

BIENVILLE PARISH—W. G. Gary, Tr.'s, Snyder 1, 15-16-6w, dr shale 1900 ft.

BOSSIER PARISH—Nell & Lanier's Biedenharn 1, 23-21-14, sd 790 ft. Walker et al's Antrim 1, 28-22-13, bailing once weekly 42 gravity oil some gas about 20 ft oil in hole, td 3048 ft. John F. Woodman's Bolinger 1, 9-22-11, sd 3532 ft. Magnolia Pet. Co.'s B. M. Cook 1, 2-22-11, cmtd back to 2710 ft waiting cmt to set, td 3215 ft. Triangle Drilling Co.'s J. H. Fullilove 1, 11-17-12, show gas 855 ft, dr 920 ft.

CADDO PARISH—Palmer Corp.'s Hunter Est. 1, 8-19-14w, lcn. Hunter Est. 2, 8-19-14w, lcn. Sam Gold et al's Henderson 1, 17-19-14, lcn. Lide & Davidson's Glassell 1, 1-19-15, cmtd 6-in cas 2400 ft, td 2542 ft. Root Ref.'s Liebman 1, 12-19-15 dry abn, td 2588 ft. Ohio Oil Co.'s Hunter Est. 1, 17-19-14, dr chalk 1650 ft. Hunter Est. 2, 17-19-14, drk. Hunter Est. 3, 17-19-14, lcn. Hunter Est. 4, 17-19-14, lcn. Standard Oil Co. of La.'s W. K. Henderson 1, 7-19-14, sw abn, td 2427 ft. P. W. Oden 1, 18-19-14, dr showing oil streaks shale set 6-in 2372 ft, sandy shale 2386 ft, td 2405 ft. Hunter Est. 2, 8-19-14, cmtd 6¼-in cas 2387 ft, tested 360 ft oil thru ds, td 2416 ft. Hunter Est. 3, 17-19-14, lcn. Hunter Est. 4, 17-19-14, dr shale 2160 ft. Gulf Ref. Co.'s P. W. Oden 1, 18-19-14, flowed oil for 10 minutes thru ds, arr set 6-in cas, td 2400 ft. P. W. Oden 2, 18-19-14, set 6⅝-in cas 2383 ft, td 2405 ft.

CLAIBORNE PARISH—Smitherman & McDonald's Miller 1, 17-23-8, temp abn, td 4780 ft.

CATAHOULA PARISH—Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

DESOTO PARISH—L. M. Moffitt's Boatright 1, 3-10-13, tested 10,000 ft gas, sd 3078 ft. P. J. Becker's Tull 2, 23-12-15, dr 1400 ft. Carlton Drilling Co.'s Stephens 2, 12-11-16, sd wo 2046 ft. Longstreet Synd.'s Ramsey 1, 33-13-16, changing to heavy rig, td 2802 ft. Benedum & Trees' State 2, 22-14-12, dr 2600 ft.

FRANKLIN PARISH—Ruston Drilling Co.'s West Va. Lbr. Co. 1, 23-15-7e, dr shale 2365 ft. Davis et al's Moore 1, 12-11-6e, sd 1430 ft.

GRANT PARISH—Carter & Collins' Ball Lbr. Co. 1, 29-7-1w, temp abn, td 2410 ft.

JACKSON PARISH—Geo. O. Baird's Tremont Lbr. Co. 1, 24-17-1w, dr hard rock 1504 ft.

LINCOLN PARISH—V. E. Shaw's Voss 1, 1-20-3w, sd 2740 ft.

MOREHOUSE PARISH—Rainbow Oil Co.'s Louisville Cooperage 1, 33-22-8e, drk.

NATCHITOCHES PARISH—S. D. McDaniel's Clarke-Morse Lbr. Co. 2, 23-5-6w, sd 2536 ft. Robeline O. & G. Co.'s Cassady 1, 7-8-9w, sd wo 3230 ft.

OUACHITA PARISH—Ouachita Nat Gas Co.'s D'Arbonne B-2, 25-19-2e, sd 3349 ft. Phillips et al's School Fee 1, 16-16-4e, tested sw 3637 ft arr, to deepen.

RAPIDES PARISH—G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glenmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Austin & McDonald's Millsaps 1, 17-17-6e, dr gmbo 1535 ft; Millsaps 2, 17-17-6e, sd waiting ds, td 2695 ft; Millsaps 3, 16-17-6e, lcn; Millsaps 4, 16-17-6e, lcn. S. R. Humble's Binion-Sartor 1, 22-17-6e, lcn. Etheridge 1, 28-17-6e, cmtd 6-in cas 2291 ft.

SABINE PARISH—W. J. Garnier's Bowman-Hicks 1, 12-7-12, sd 625 ft. R. L. Gay, Tr's Bowman-Hicks 2 (new series), 14-7-14, sw abn, td 3621 ft; Bowman-Hicks 3, 14-7-14, flowing 15 bbls daily est, td 2178 ft. Long-Bell Lbr. Co. 1, 26-8-14, dr 950 ft. Sabine Lbr. Co. 2, 23-7-14, rig up; Bowman-Hicks 4, 14-7-14, bldg drk. A. H. Tarver's Long-Bell Lbr. Co. 1, 29-8-13, dr 2770 ft.

TENSAS PARISH—Enochs et al's Curry 1, 39-11-12, sw abn, td 3765 ft.

UNION PARISH—Texas Co.'s F. M. Fuller 1, 9-21-2w, dr 189 ft. Sundby et al's Security Trust 1, 6-23-1e, sd wo 2300 ft. G. E. Carmatte's Tugwell 2, 21-22-1e, trying mud off sw 1845 ft. Carter & Wingfield's Clarke A-3, 8-23-1e, drk. H. C. McDonald's Union Sawmill 2, 8-23-1e, sd 1500 ft.

WEBSTER PARISH—P. Hudson's Slack 1, 1-22-11, sd repr rig 2465 ft. Nemours Corp.'s Munn 2, 1-22-10, tested 4 mil ft gas wo 2633 ft. Magnolia Pet. Co.'s Atkins 1, 4-22-9, tested 10 joints oil and 8 joints sw ds test 2665 ft, set 8⅛-in cas 2650 ft. John F. Woodman's Boyd 1, 3-22-11, drk. Magnolia Pet. Co.'s Denman 1 ,1-22-11, recmt bottom, td 2716 ft. McCook & Hibbler 1, 22-21-10, coring red shale 5693 ft.

MOUNTAIN STATES

NEW MEXICO

CHAVES—Snowden & McSweeney, Merchant 1, nc 27-15s-23e, abd at 4287 ft. R. T. Neal et al, Russell 1, 31-14-25e, sd 1385 ft. Warman et al, 1, sw 23-13-24, sd. Tannehill et al, Butler 1, se 15-21-24, dr 1065 ft. Transcontinental, Robbins 1, 1-14s-28e, dr 3025 ft.

DEBACA—Matador Oil Co., State 1, sw 6-4n-20e, dr 1465 ft. Pittsburgh Oil Co. 1, ne 16-1s-27e, sd 4506 ft. Transcontinental, McWhorter 1, 6-35-22e, dr 4115 ft.

GUADALUPE—Hanchett Oil Co. 2, 14-8n-24e, fsg tools 2403 ft.

LEA—Midwest Refining Co., Capps 31, sw 3-19-38, dr 2175 ft; Farnsworth 19, sw 12-26-37, stand 4115 ft; Gregory 22, sw 31-25-37, dr 2615 ft; Fisher 16, ne 5-20-35, ran 15½-in to 503 ft and sd. Gypsy Oil Co., Mattern 1, 24-21-36, fsg 3125 ft; Humphreys 1, sw 25-25-36, dr 485 ft. Exploration Co., Record 1, 26-19-35, td 4556 ft. Morton et al, State 1, ne 32-11-38, fsg 1880 ft. Texas, Sheppard 1, ne 6-26s-37e, spray oil 3230 ft, dr on iron; Moberly 1, se 17-26-37, fsg 3540 ft; Humphreys 1, sw 18-20-32, dr 1100 ft. Cranfill & Reynolds, Meyer 1, sw 22-24-36, dr 967 ft. Pueblo Oil Co., Scott 1, se 29-25s-37e, dr 3100 ft. Curtis Dr. Co., Nixon 1, 22-18-24, sd 1200 ft. Empire Gas & Fuel, State 2B, se 8-21-35, dr 1031 ft; Empire Gas & Fuel, Closson 1, se 6-22-36, dr 520 ft. Texas Pacific Coal & Oil, State 1, sw 22-23-35, plugging back from 3950 ft. Henderson et al, McDonald 1, se 19-20-34, plugging back from 3613 ft. Vacuum Oil Co. 1, 14-17-34, dr 4550 ft. Bordages et al, Hughes 1, 27-19-38, casing trouble 4012 ft, 300

XUM

ft oil in hole. Pueblo Oil Co., Scott 1, se 29-25-37, dr 3100 ft. Ohio Oil Co., Price 1, 7-19-39, rig; Ohio Oil Co., State 1, 9-13-38, rig. Empire-Henderson et al, Martin 1, ne 28-20s-33e, dr 745. Buell & Hagen, State 1, ne 13-11s-35e, dr 1365 ft. Marland, Flint 1, se 28-20s-34e, dr 100 ft.

McKINLEY—J. W. Halsell, Santa Fe 1, 17-19-9, dr 1810 ft. San Juan Coal & Oil Co. 1, se 27-18n-9w, dr 1725 ft .

ROOSEVELT—J. T. Keegan et al, Pepper 1, 6-1s-36e, ready to spud. Smith & Sloan, Lovern 1, se 4-3s-35, dr 1640 ft.

RIO ARRIBA—Berringer et al, Hartman 1, ne 8-29-7, ur 12½-in to 575 ft.

SAN JUAN—Continental Oil Co., Munoz 17, 2-29-19, deepened to 6774 ft, setting wall packer, oil showing much increased. Dorothy Oil Co., 29-30-9, straight crooked hole 635 ft. Kutz Canon O. & G. Co., Day 1, 20-28-10, ur 10-in to 720 ft. Blackrock Oil Co. 1, sw 11-25-13, sd 1550 ft, will resume. Iowa Oil Synd., Viles 1, 28-29-11, sd 694 ft. Angels Peak Oil Co., Kutz Canon 1, 11-28n-11w, repair fire damages, td 3100 ft. Great Mesa Oil Corp., Roderick 1, sw 11-22-14, dr 367 ft. Milwaukee-N.-Mex. Synd., Beardsley 1, 30-38-11, stand 1890 ft. Childers D. & P. Co., Westwater 2, nw 24-31-18, water trouble 2525 ft. Reserve Oil Co., Shaffer 2, ne 1-21-14, dr 600 ft.

SAN MIGUEL—Benedict-Wilson 1, ne 25-17-16, sd 800 ft. Pioneer O. & G. Co., Thunderbird 1, nw 14-15-16, dr 1860 ft. Starr Oil Co., Adams 1, ne 25-17-16, td 660 ft.

SOCORRO—Arnold et al 2, ne 13-6-1, sd 1975 ft.

TORRANCE—Bluhall O. & G. Co., 20-6-10, stand 1800 ft. Sinnock et al, Kutchin 1, ne 13-7-7, td 197 ft, crooked hole.

VALENCIA—Rio Puerco Oil Co., N. M.-Ariz. Land Co. 2, nw 13-6-2, wait pipe 3145 ft. Acme Oil Co., N. M.- Ariz. Land Co. 1, 26-6-3, stand cem 3670 ft.

COLORADO

ARCHULETA—Juanita Oil Co., Harvey 1, sw 4-32n-3w, stand 725 ft.

BENT—Marland Oil Co., Pipe Springs 1, se 27-29-49, dr 4010 ft.

DOLORES—Transcontinental, Glade 1, nw 30-41-16, resuming at 4005 ft.

ELBERT—Progressive O. & Lo Co., Pease 1, sw 27-10-60, spd 70 ft.

JACKSON—Midwest, nw 9-6-80, ready to spud. P. & R. Corp., Hendershot 1, 2-6-81, sd 1900 ft.

JEFFERSON—Ruby Hill O. & G. Co., Braden 1, se 14-4s-69w, dr 2400 ft.

LAS ANIMAS—Parker Club & Kinney Coastal, 4-28-68, sd 3008 ft. Kentucky Oxy & Hyd Co., 1, se 35-29-60, dr 710 ft.

LARIMER—Barrows et al, 7-11s-68w, sd 2000 ft.

LAPLATA—Royal P. & R. Red Mesa 1, 27-33-12, ready to resume at 567 ft.

LINCOLN—Kelly Oil Co., State 1, ne 36-14-57, sd 1900 ft.

MESA—High Line Oil Synd., Hoel 1, ne 23-8s-104, sd 2712 ft. Parrish & Langston, D. & R. G. Western 1, nw 23-1-1, sd indefinitely at 415 ft.

MOFFAT—McLaughlin et al, Williams 1, 2-3-91, dr 3500 ft. McCormick et al, Sales 1, se 28-4n-92, spd 35 ft.

MONTROSE—Uncompahgre O. & G. Co., Colorado Title & Trust 1, 27-50-10, fsg 2012 ft.

PUEBLO—Christy-Frantz Synd., Mannerich 1, sw 34-21-63, sd 1165 ft. Beulah Dome Oil Co., Hedland 1, sw 7-23-67, spd 30 ft. Boone O. & G. Co., Ritter 1, nw 33-18-60, show gas top Dakota 3000 ft.

RIO BLANCO—White Eagle O. & G. Co., Fordham 1A, sw 9-2-26, dr 215 ft.

YUMA—Major Pete., Inc., Black Wolf 1A, sw 7-2-43, ready to spud. Phillips Pete. Co., Andrews 1, nw 3-2-42, dr 225 ft.

WYOMING

BIG HORN—P. & R. Corp., Hill 1, 7-57-97, dr 450 ft; Rand 1, 7-57-97, hole dry at 2192 ft; McKinney 1, 12-57-97, location; 39, 24-51-93, sd 600 ft; 3, 24-56-98, dr 2610 ft by whipstock. Cody Pete Co. 1, sw 27-57-96, sd 1415 ft. Cross Gas Co. 1, 23-56-97, dr 4216 ft. Ohio Oil Co., Easton 1, 33-56-97, dr 1445 ft.

CARBON—P. & R., 2-19-88, dr on iron 4003 ft. C. E. Bivens et al, Baggs 1, 35-13-92, resum at 1005 ft.

CONVERSE—Criterion Oil Co., ne 5-31-70, resum at 3600 ft. John Ackard, 21-31-69, fsg part cable around 3500 ft.

FREMONT—P. & R., Muskrat 2, 33-34-92, rig up; Muskrat 3, 1-33-92, bldg rig. Kinney-Coastal, 22-3-1, sd 2420 ft., changing crews.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, dr 2380 ft.

LINCOLN—Midwest Ref. Co., Waterfall, 35-22-115, dr 3165 ft.

NATRONA—Prairie O. & G. Co., Baird 1, 22-31-81, dr 410 ft.

PARK—P. & R., Pitchfork 1, 12-58-102, sd 225 ft. Midwest, Rosenburg 36, nw 25-58-98, strrmg to 2575 ft; Rosenburg 6, 25-58-98, location. Resolute Oil Co., nw 17-57-101, resum dr 2155 ft. Henderson Prod. Co., 31-58-99, second sand dry. Will deepen.

SWEETWATER—Mtn. Fuel Supply Co., Tucker 1, 18-13-99, stand 2490 ft; Humphreys 1, 2-12-101, dr 3640 ft; Otto Arnold 1, 24-19-104, dr 2695 ft; Newberger 1, 13-12-101, dr 1350 ft. P. & R. Corp., 26-20-104, dr 3720 ft.

SUBLETTE—California Co., Wyss 1, 12-32n-115w, dr 2129 ft.

UNITA—California Co., U. P. 1, 7-17-119w, fsg bit 3183 ft.

WESTON—WyomingDrilling Synd., 15-44-64, successfully sidetr 600 ft corkscrew casing, to 4350 ft.

TEXAS GULF COAST

Company, Well and Location		Initial Production Bbls.	Depth
BRAZORIA COUNTY—			
Meyer et al, Davidson 3, Clemens Dome	*	930	
COLORADO COUNTY—			
Shell, Frazier 1, Bernado	*	1500	

AUSTIN COUNTY—F. & M. Drlg. Co.'s Mewis 1, w of Raccoon Bend and e of Bellville, dr 3529 ft sand and shale. Whittington et al's Lass 1, 4 mi nw Bellville, dk.

BRAZORIA COUNTY—Humphreys Corp.'s Bryan 1, Bryan Heights, dr 3370 ft hard lime. Meyer et al's Davidson 3, Clemens Dome, abn 930 ft. Empire's Brock 3, Stratton Ridge, dr 3665 ft sand and lime.

CALHOUN COUNTY—Baker & Thompson's 1, 9 mi w Pt. Lavaca, fsh 2730 ft.

CHAMBERS COUNTY—Pure's Mayes 2, Lost Lake, sd 1990 ft; Mayes 3, Lost Lake, sd 1870 ft. Layne et al's Fitzgerald 1, 1 mi s Barbers Hill, ru.

COLORADO COUNTY—Shell's Frazier 1, Bernardo, abn 1500 ft. Jno. Deering's Von Rosenberg 2, 2½ mi w Alleyton, dr 1690 ft lime. Merrett et al's Zverck 1, 2 mi e Elllnger, sd 320 ft.

FAYETTE COUNTY—Moore et al's Kerr 1, Muldoon, sd 2400 ft

FORT BEND COUNTY—Humble's Miller 1, 3½ mi sw Rosenberg, dr 755 ft sand and lime. South Texas Pet. Co.'s Winkleman 1, Needville, dr 3925 ft shale.

HARDIN COUNTY—Guedry Drilling Co.'s Guedry 1, 3 mi s Batson, drk. Gulf Coastal Oil Co.'s Nona Mills 1, 5 mi e Saratoga, sd 1725 ft. West Prod. Co.'s Baker 1, 5 mi e Saratoga, crystallized lime at 4405 ft.

HARRIS COUNTY—Humble's Simms-Smith 75, Goose Creek, set tubing, td 4419 ft; Warren 5, Hockley, dr 4720 ft sand and shale; Irvin 1, Mykawa, dr 3070 ft; Williams 1, Humble, dr 4840 ft sand and shale; Woodburn 1, 2 mi s Genoa, dr 1638 ft gbo and lime. Paxton et al's Brubacker 1, s mi ne Clodine, sd 1125 ft. Paxton & Pundt's Brown 1, sd 1900 ft. Little York Oil Co.'s Davis 1, Little York, sd 3830 ft. York & Robertson's Garrett 1, 5 mi se Fauna, ru.

JEFFERSON COUNTY—Deep Test Oil Corp.'s McFaddin 1, 1 mi e Spindle Top, sd 3500 ft. J. W. Farhar et al's Rohwedder 1, 5 mi ne Beaumont, depth 2965 ft. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, drk. River Oil Co's Ship Channel Ld. Co. 1, 2 mi se Beaumont, sd 1710 ft. Bleakie Oil Co.'s Tollivar 1, 2½ mi nw Voth, sd 2235 ft. The Texas Co.'s Pipkin 1, Big Hill, trying to blow out at 5943 ft. Gulf's Thomas 11, Fannett, dr 5416 ft shale; Thomas 12, Fannett, dr 1250 ft; Bordages A-7, Fannett, dr 5600 ft. Nederland O. & G. Co.'s Young 1, s Nederland, dr 2185 ft gbo. Yount-Lee Oil Co.'s Nona Mills 1, 5 mi s Beaumont, depth 6720 ft, shale and lime, stuck drill stem. Shell's Heisig 1, 2 mi n Hampshire, dr 4700 ft shale and lime.

LIBERTY COUNTY—Barlow et al's Rinchcliff 1, 2½ mi ne Cleveland, sd 2215 ft Kouri et al's Campbell 1, 6 mi s Cleveland, sd 2000 ft. Humble's Sterling 5, Moss Bluff, dr 1370 ft gbo. Tan Bay Oil Co.'s Christian 1, 10 mi n Hardin, sd 1115 ft. Republic Prod. Co.'s Mysilvic 1, 2 mi s Hardin, dr 3346 ft gbo. Gulf's Boyt 1, Hankamer, dr 2650 ft sand and shale. Fort Bend Oil Co.'s Bladerack 1, N. Dayton, swabbed 100 bbls at 3700 ft, will deepen. Sun's Kovaleik 2, N. Dayton, dr 4700 ft hard sand.

MATAGORDA COUNTY—Crossland et al's Hawkins 1, Shepherds Mott, sd 5260 ft. Dr. P. S. Griffith's Culver 1, e Citrus Grove, sd 3215 ft; Baer 1, 1¼ mi n Gulf Hill, sd 2120 ft. West Prod. Co.'s Meyers 1, 1½ mi n Gulf Hill, dr 4405 ft hard sand.

ORANGE COUNTY — Veteran Oil Co.'s Reed 1, 2 mi se Orange fld, dr 3600 ft shale.

VICTORIA COUNTY—Humble's Welder 1, 3 mi se Nursery, dr 1040 ft.

WALLER COUNTY—The Texas Co.'s Young 1, 3 mi from Raccoon Bend, dr 3824 ft sand and shale.

WASHINGTON COUNTY—Thomas et al's Giddings 1, 4 mi e Brenham, dr 1340 ft shale. W. D. Anderson's Rubenstein 1, 4 mi se Gay Hill, sd 340 ft. Brains et al's L. S. Smith 1, 4½ mi ne Gay Hill, ru. Kellett et al's Carter 1, sd 900 ft. Dekle et al's Calhoun 1, 4 mi e Quarry, sd 800 ft.

WHARTON COUNTY—Hearte Oil Co.'s Brown 1, 3 mi s El Campo, sd 3500 ft.

SOUTHWEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CALDWELL COUNTY—		
Harper et al, Tabor 1, ¾ mi w Lytton Springs	15	1895

BASTROP COUNTY—Gypsy Prod. Co.'s Lottman 1, e Bastrop, sd 2565 ft. Livingston et al's McCall 1, 1 mi s Bastrop, fsh 2785 ft. Owens et al's Goodman 1, 1½ mi Cedar Creek, sd 2330 ft. Howell et al's Weckham 1, 2 mi s Paige, dr 160 ft shale. Gulf's Bell 1, 2½ mi w Sayersville, dr 3040 ft.

CALDWELL COUNTY—Anderson et al's Horner 1, 1 mi s Lockhart, depth 1400 ft. Forest Oil Co.'s Moore 1, ½ mi s Luling, fsh 1490 ft. Dixon et al's Teas 1, Branyon district, dr 2140 ft chalk. Detex Oil Co.'s Keefer 1, 3½ mi w Luling, drk.

GONZALES COUNTY—Greene et al's Dix 1, 1 mi n Bellmont, sd 1235 ft. Linderman Bros.' Frampton 1, 1 mi n Waelder, sd 610 ft. Joe Bruner's Miller 1, 1 mi n Waelder, sd 2650 ft. Fort Bend Oil Co.'s Hamm 1, 2½ mi e Hardwood, spd. Crown Pet. Co.'s Hattenbach 1, 8 mi sw Sample, dr 1950 ft shale.

GUADALUPE COUNTY—Christie et al's Thomas 1, 12 mi se Seguin, sd 1280 ft. Sights et al's Woehler 1, 4 mi e Seguin, sd 2405 ft. Miller Bros.' Springs 1, 5 mi s Seguin, dr 2620 ft lime, will test. The Texas Co.'s Dallas Wilson 1, 12 mi e Seguin, drk. Magnolia's Adams 1, Kingsbury, dr 2485 ft chalk. Humble's Johnson 1, 1 mi w Staples, dr 430ft shale

STARR COUNTY—The Texas Co.'s Virginia Guerra 1, dr 3500 ft.

SOUTH LOUISIANA

ASCENSION PARISH—Gulf's United Lands Co. 14, Sorrento, dr 3840 ft sand and shale; Belle Helene Sugar Co. 1, Darrow, abn 5600 ft. Triumph Oil Corp.'s Lacey et al 2, 3 mi se Sorrento twste, sd 2570 ft. Big Dome Drlg. & Dev. Co. and J. S. Kimbrough's Rearwood 1, Darrow, dr 3700 ft. Baton Rouge Pet. Co.'s Liotta 1, sd 1000 ft. Pickhard & Geisman's Fee 1, moving in.

CALCASIEU PARISH—The Texas Co.'s Moss 1, Lockport, test salt water at 4717 ft, will deepen. J. O. Davis' Mimms 1, Lake Charles, dr 4030 ft sandy shale.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake A-3, s end of Calcasieu Lake, fsg 3500 ft; Calcasieu Lake B-5, lcn. Pure's Yount-Lee 7, Sweet Lake, fsg at 4600 ft. Shell's Watkins 6 and 10, Black Bayou, preparing to pump; Watkins 11, Black Bayou, lcn.

IBERIA PARISH—The Texas Co.'s Vermillion Bay A-3, fsg 4300 ft. Gulf's State Z-9, Loreauville, ru.

IBERVILLE PARISH—Shell's Wilbert 3, White Castle, dr 5000 ft sand and shale. Standard of La.'s Wilbert 2, Bayou Blue, dr 3355 ft sand; Wilbert 3, Bayou Blue, ru; Schwing 1, Bayou Blue, dr 4730 ft hard sand; Schwing 2, Bayou Blue, ru; Schwing 3, Bayou Blue,

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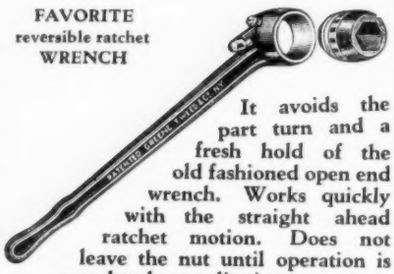

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dredged canal to lcn; Schwing 4, Bayou Blue, lcn; Schwing 5, Bayou Blue, drk.

JEFFERSON DAVIS PARISH—Vacuum's Earl et al 1, Roanoke, sd 5920 ft; DeVilbiss 1, Roanoke, sd 5685 ft.

La FOURCHE PARISH—Gulf's Stark 12, Thibodaux, dr 1275 ft sand; Stark 14, Thibodaux, drk; Stark 15, Thibodaux, drk; Stark 16, Thibodaux, dr 1725 ft; Stark 17, dr 100 ft.

PLAQUEMINES PARISH—Gulf's Morris & Rose 1, Spanish Pass, drk. The Texas Co.'s Garden Island Bay 1, 15 mi se Venice, dr 1950 ft anhydrite.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay Lbr. Co. Fee 2, Port Barre, dr 3590 ft sand showing oil. Gulf's Gaudet 1, Port Barre, dr 3515 ft hard sand.

ST. MARTIN PARISH—Ohio Oil Co.'s Martin et al 3, Hager Dome, sd 4490 ft. The Texas Co.'s St. Martin Land Co. Fee 1, Hager Dome, sd 1235 ft; St. Martin Land Co. Fee 2, Hager Dome, sd; St. Martin Land Co. Fee 3, Hager Dome, piling standing; St. Martin Land Co. Fee 4, Hager Dome, piling standing.

TANGIPAHOA PARISH—Joan Dev. Co.'s Lake Superior Piling Co. 1, nw Section 20-5s-9e, dr 2425 ft gbo.

TERREBONNE PARISH—The Texas Co.'s Taylor Bayou B-1, Sec. 28-21s-14e, driving piling; Lake Barre A-2, Sec. 30-21s-20e, driving piling; Lake Pelte B-1, Sec. 8-23s-18e, set 20-inch casing at 150 ft; Four Isle Bayou B-1, Sec. 23-21s-16e, bldg drk; Timbalier Bay A-1, Sec. 19-23s-20e, sd 1115 ft; Bay Coon Road B-1, Sec. 17-22s-18e, completed as 25 million foot gas well at 680 ft; Dog Lake Bayou A-1, Sec. 6-22s-16e, will put in air compressor, ran tubing, depth 1062 ft, well flowed 10 to 15 bbls oil.

WEST TEXAS

Completions

Company, Well and Location		Initial Production Bbls.	Depth
FISHER COUNTY—			
J. B. Dunigan et al, Henry 1		*	3415
Gilman-McMurray & French, Cleveland 1		*	3500
PECOS COUNTY—			
W. A. Moncrief et al, Tippett 1		*	1578
Trees Oil Co. & Empire, Trees 1		*	2309
Transcontinental Oil Co., University 1-B		*	2303
STERLING COUNTY—			
Wilson et al, Spence 1		*	728

ANDREWS COUNTY—Mid-Continent Pet. Corp.'s Fisher 1, elev 3192 ft, top salt 1720 ft, dr 3035 ft.

BORDEN COUNTY—Gibson-Johnson et al's Higginbotham 1, elev 2432 ft, top salt 1135 ft, top lime 2870 ft, dr 3740 ft. W. A. Moncrief et al's Munger 1, lcn.

BREWSTER COUNTY—Ed. W. Bateman & Co.'s Neville 1-A, lcn. Brewster Oil Co.'s Fee 1, dr 1895 ft. E. L. Chapman et al's Skinner 2, machine. J. P. Johnson & Bert Weekly's Jackson-Harmon 1, elev 3972 ft, dr 1095 ft.

COKE COUNTY—W. C. Cates et al's Mims 1, dr 1730 ft; Mims 2, spudded and sd. Mid-Kansas O&G Co.'s Lackey 1, elev 2152 ft, co 3785 ft. Ray McCamey et al's McCutcheon 1, ur 8-inch cas 2300 ft.

CONCHO COUNTY—J. L. Duffey et al's Gilliam 1, spudded and sd. Jones & Liner's Jones 1, sd 1264 ft. A. W. Turner et al's J. H. Brosig 1, lcn.

CRANE COUNTY—Gulf's Waddell 7, elev 2763 ft, top salt 1108 ft, dr 2910 ft.

CROCKETT COUNTY—W. A. Moncrief & W. W. Donnelly's R. Massie 1, (Sec. 47) ur 1243 ft. Eppenauer Drlg. Co. & West Texas Pet. Corp.'s Noelke 1, sd 565 ft. Lewis & Daniels' Pecos River Bed 1, elev 1967 ft, top lime 1602 ft, sd 1008 ft.

CULBERSON COUNTY — Deep Rock Oil Co. & Grisham-Hunter Corp.'s Kloh 3, machine. Hickey et al's Finley 1, elev 3916 ft, dr 2190 ft. Scott & Dittman's Miller 1, elev 4059 ft, dr 2140 ft. West Texas Oil & Explo. Co.'s McGregor 1, dr 625 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, sd 4005 ft.

FISHER COUNTY—Cranfill & Reynolds et al's Willingham 2, elev 1808 ft, top lime 3071 ft, sd 3475 ft. Culberson Bros. & Mesa Oil Co.'s Griffin 1, elev 1842 ft, sd 2970 ft. Magnolia's Alice Lee 1, spudding. Mid-Kansas O&G Co. & Phillips Pet. Co.'s Stephenson 1, bad hole 670 ft. Roeser-Pendleton & Amerada's Haught 1-A, skid rig. The Texas Co. & Phillips Pet. Co.'s Hall 1, elev 2102 ft, top lime 3160 ft, ur 3325 ft. White Eagle O&R Co.'s Hughes 1, elev 1815 ft, dr by cas 2383 ft.

GARZA COUNTY—Emerald Oil Co.'s J. C. Bargsley 1, lcn. Reed 1, top lime 1625 ft, co for shot with 300 ft oih at 2527 ft. Gulf Prod. Co.'s H. B. Street 1-D, spudding.

GLASSCOCK COUNTY—Gibson-Johnson et al's Dean 1, dr 815 ft. Lion O&R Co.'s Coffee 1, lcn. Texas-State Oil Co.'s Edwards 1, rig.

TOM GREEN COUNTY—Williams et al's Wilkey 1, sd hfw 750 ft.

HOWARD COUNTY — A. & F. Oil Co.'s Scrivner 1, elev 2760 ft, sd in blue shale 2502 ft. Fuhrman Pet. Corp.'s Reed 1, lcn. Gibson-Johnson et al's Reed 1, elev 2323 ft, top lime 1910 ft, testing show oil 2703-08 ft, td 2716 ft. Magnolia's H. Hyman 2, dr 1895 ft. McGinley-Sigler Co.'s B. Hyman 1, dr 335 ft; H. Hyman 1, dr 1005 ft.

HUDSPETH COUNTY — The California Co.'s Uninversity 1, elev 5833 ft, dr 1630 ft. Rio Grande Oil Co.'s Western States Fee 1, elev 4799 ft, dr 715 ft. Western States Oil Co.'s Gardner-Mosely 1, elev 5086 ft, sd 3155 ft; Moore 1, elev 5050 ft, sd 2760 ft.

IRION COUNTY—J. B. Crawford et al's Williams 1, machine. Furhman Pet. Corp.'s Sugg 1, Lse. 1, dr 1275 ft. Kimbrough et al's Nutt 1, elev 2299 ft, sd 1420 ft. W. W. Brown-Kimbrough & Flinchbaugh's Tankersley 1, elev 2241 ft, fsh cas with show oil 1318-29 ft. Kingwood Oil Co.'s Sugg 1, elev 2334 ft, dr black shale 6865 ft. Pecos Valley Oil Co.'s Stocks 2, ur 405 ft. F. E. Webb et al's Nutt 2, lcn.

JONES COUNTY—Brewer et al's Goodman 1, lcn. Geo. Callahan & Worth Oil Co.'s Britton 1, dr 2455 ft. Campbell et al's King 1, spudded and sd. W. G. Clark et al's Dickenson 1, dr 2410 ft; Miller 1, lcn; Neuman 1, rig. Condor Pet. Co.'s McDonald 1, ur 2600 ft. P. K. French et al's Leeson 1, set cas 1540 ft. Sam Knepley et al's Horn 1, dr 2410 ft. McGinley-Sigler Co.'s Whittemore 1, dr 2115 ft. Gulman & McMurray's J. F. Willis 1, co 1905 ft. E. M. Treat O&G Co.'s Hodges 1, dr

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1655 ft. White Eagle O&R Co.'s Teague 1, dr 990 ft.

LOVING COUNTY— — Lockhart & Co.'s Hazell 1, elev 2705 ft, dr 620 ft; Hazell 2, top salt 700 ft, dr 1920 ft; Johnson 2, dr 2575 ft; Wheat 1-H, elev 2713 ft, to psalt 720 ft, top Deleware 4152 ft, co after shot 110 qts at 4150-80 ft, td 4197 ft.

LYNN COUNTY—Hart Oil Corp. & Geo. McCamey's Edwards 1, elev 3128 ft, dr 2110 ft.

MENARD COUNTY—J. L. Duffey & Cromwell's Winslow 1, dr 995 ft.

MIDLAND COUNTY — Phillips Pet. Co.'s Stokes 1, elev 2666 ft, top salt 1610 ft, top gray lime 3720 ft, fsh 3915 ft.

MITCHELL COUNTY—H. H. Adams et al's Ellwood 2, sd 1½ mil ft gas 539-72 ft. The California Co.'s Clark 2, top lime 1540 ft, dr 2795 ft; J. J. Handley 1, rig. Clopton & Hammon's McKenzie 1, lcn. Republic Prod. Co.'s Scott 1, dr 280 ft. Simms Oil Co.'s Ellwood 1, elev 2237 ft, top lime 1215 ft, ur cas 4002 ft. Spence et al's W. C. Brown 1, elev 2328 ft, sd 802 ft. Teas & Wheeler's Radford 1, crooked hole, td 4048 ft. Westyde Inv. Co.'s Ellwood 1, spudding.

NOLAN COUNTY — L. G. Bradstreet & Co.'s Kuteman 1, dr 1185 ft. Phillips Pet. Co.'s Plunkett 1, dr 1210 ft.

PECOS COUNTY—Harry Adams Drlg. Co. et al's University 1, spudding. Atlantic Oil Prod. Co.'s Trees 1, elev 2489 ft, dr 1310 ft. A. R. Bell et al's Gray 1, elev 2532 ft, sd hfw 1465 ft. M. H. Black et al's Pecos 1, elev 2453 ft, top salt 1095 ft, swab 15 bbls oil after shot in pay 1618-48 ft. Buell & Hagan et al's University 1-B, elev 2760 ft, top salt 945 ft, sd in three million ft dry sweet gas 1320 ft. Karl Crowley et al's Heiner 1, elev 2548 ft, sd hfw 1288 ft. Ditto Oil Interests' Montgomery 1, elev 4434 ft, sd 1505 ft. Doran & McGee's Pecos 1, sd 1035 ft. Cowboy Evans et al's Pecos 1, spudded and sd. Gibson-Johnson et al's Grace 1, dk. J. W. Grant et al's Turney 1, elev 2592 ft, top lime 1015 ft, sd 4590 ft. Independent O&G Co.'s Iowa Realty Co. 1, machine. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1442 ft. R. E. Moore et al's Arnold 1, dr 410 ft. J. D. O'Mara et al's Byrne 1, dr 415 ft. Phillips Pet. Co.'s D. W. Bowser 1, machine; Courtney-Pryor 1, (Sec. 78, Blk. "OW"), elev 2951 ft, passed up shallow oil pumper, set cas 1402 ft. Plymouth Oil Co.'s Perry 2, top salt 1060 ft, dr 1770 ft. Rio Pecos Oil Co.'s Yates 2, spudding. Schumaker et al's Williams 1, elev 2388 ft, sd 1200 ft. Shell Pet. Corp.'s University-Bower 1, sd 350 ft. Shell & Kirby Pet. Co.'s University 1, elev 2628 ft, top Pennsylvanian 4662 ft, dr 4740 ft. Ervin Drlg. Co. & B. J. Spikes' Brown 1, elev 2387 ft, top salt 740 ft, sd 1328 ft. Talbot et al's Unsicker 1, machine. Taylor-Link Oil Co.'s University 1, dr 810 ft. Tidal Oil Co.'s University 1, dr 470 ft. Transcontinental's University 1, elev 2552 ft, top lime 1035 and 3315 ft, fsh 4312 ft. Clayton Williams et al's Sanford 1, dr 305 ft.

PRESIDIO COUNTY—C. E. Miller-Delmar et al's Tootle 1, co 2485 ft.

REAGAN COUNTY—Skelly Oil Co. & Utah Southern's University 4, elev 2852 ft, top salt 1270 ft, set cas 3030 ft. Big Lake Oil Co.'s University 1-C, elev 2731 ft, top salt 1100 ft, ur 15½-inch cas 2578 ft; University 2-C, elev 2703 ft, top salt 1071 ft, dr 2870 ft; University 131, trace oil 6328-30 ft, dr 6915 ft; University 151, casing parted 3035 ft.

REEVES COUNTY — Earl Hemby et al's Brooks-Huling 1, spudded and sd. Penn Oil Co. et al's Bowles 1, elev 2783 ft, top salt 1725 ft, sd with collapsed cas 5418 ft. Southern Crude & Dixie Oil Co.'s Kloh 1, elev 2784 ft, crooked hole 1463 ft. D. R. Thompson et al's Eddins 1, elev 2719 ft, sr 5658 ft. Lee O. White et al's Mrs. Lizzie Hershenson 1, elev 3244 ft, ur 10-inch cas 1490 ft.

RUNNELS COUNTY—Herbert Oil Co. et al's Currie 1, dr 660 ft. Independent O&G Co.'s Rollwitz 1, dr 2710 ft. Marland Prod. Co.'s Herring 1, elev 1821 ft, dr 4030 ft. Ira Nourse & E. Tilton's Cramer 1, elev 1775 ft, sd 3815 ft. Pure Oil Co.'s Giesecke 3, sd 1635 ft.

SCHLEICHER COUNTY — Ft. McKavitt Oil Co.'s Tisdale 1, elev 2155 ft, sd hfw 3035 ft. Interstate Explo. Co.'s Whitten 1, sd 3545 ft. Underwood Oil Co.'s Tisdale 1, spudded and sd.

SCURRY COUNTY—R. B. Pender et al's

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Davis 1, elev 2208 ft, top salt 445 ft, fsh 2900 ft.

STERLING COUNTY—Miller Bros. et al's Foster 1, elev 2662 ft, top salt 1140 ft, top lime 2094 ft, sd 2982 ft.

SUTTON COUNTY — Phillips Pet. Co.'s Holman 1, elev 2247 ft, top lime 2315 ft, fsh 6633 ft. L. G. Priest et al's Allison 1, fsh 2440 ft. Southern Crude Oil Pur. Co.'s Allison 1, dr 4955 ft.

TAYLOR COUNTY—J. B. Jameson et al's Webb 1, water sand 3400-10 ft, dr 3460 ft. C. M. Root Drlg. Co.'s Martin 1, set cas 2445 ft. Magnolia's W. E. Hamner 1, co 2608 ft.

TERRELL COUNTY — Keck-Pecos Trust's Hamilton 1, elev 1733 ft, dr 2455 ft. Mrs. J. B. McPhee et al's Sam Belt 1, dr 515 ft. Milham Corp.'s Bassett 1, elev 2270 ft, dr 4990 ft. Wooley-Jones et al's Pankenham 1, elev 2607 ft, sd 640 ft.

VAL VERDE COUNTY—Dyer Bros. et al's Wilson 1, elev 2115 ft, dr 2920 ft. Producers Oil Co. et al's Everett 1, sd 2450 ft. Val Vert Oil Corp.'s Bassett 1-A, elev 2069 ft, sd 3760 ft.

WARD COUNTY—Atlantic & Delmar Oil Co.'s Hayzlett 2, top salt 727 ft, dr 1820 ft. Barstow O&G Co.'s Monroe-Gillespie 1, spudded and sd. Gulf Prod. Co.'s Hutchings Assn. 2, dr 1640 ft; G. W. O'Brien 5, elev 2681 ft, top salt 1273 ft, dr 2455 ft. J-H-L Oil Co.'s Hayzlett 2, elev 2505 ft, top salt 745 ft, flowed 115 bbls oil after shot, td 2488 ft. Penn Oil Co. & Atlantic's Bennett 1, rig. Tex-Oil Prod. Co.'s Redman 1-A, skid rig, td 960 ft.

WINKLER COUNTY—M. J. Bashara et al's Fee 2, lcn. V. T. Bolin & Co.'s Brown 2, spudded and sd. Liner Drlg. Co.'s Campbell 1, dr 230 ft. Magnolia's Scarborough 2, dr 1455 ft. Prairie's Scarborough 1, got hfo after pb from 3129 to 3100 ft. Shell & Llano Oil Co.'s Scarborough 6, dr 196 5ft. Texas-Canadian Oil Co. & Superior's Kloh 1, elev 3243 ft, top salt 1490 ft, sd 4008 ft. Tidal Oil Co.'s Scarborough 1, dr 2920 ft.

YOAKUM COUNTY—Bert Weekly et al's Knight 1, elev 3693 ft, dr 1320 ft.

Associated Drilling in Potrero Well

Los Angeles.—Associated Oil Company has started drilling in Pacific-Southwest 2, in the southeastern part of Potrero field, after an unprofitable experience with the first well drilled on the lease. The company's Potrero 1, a test on the holdings of the Potrero Country Club, is drilling at 4200 feet, with the formation running to oil sand. This well will be produced from about the same level as the discovery well.

Activity in the townlot section at Inglewood has increased, although the James Pollard well is flowing only 100 barrels of 42 gravity oil. St. Patricio Oil Company has located Connoly 1 near Eighth and Manchester Avenues. Other locations will be made within a few weeks.

Sasakwa Extension Wells Approach Production

Tulsa.—Several wells in the Sasakwa extension to the Allen field are approaching the producing horizon.

Sunray Oil Company and Cal Cul Oil Company's Joanna 1, SW NW SW Section 24-5n-7e, has topped the Viola lime at 4006 feet. The six-inch casing has been set at 4075 feet, and standard tools are now being rigged up.

The Texas Company's Reed 2, SW NE SE Section 23-5n-7e, found the top of the Sylvan shale at 3966 feet and is drilling ahead. The same company's Lucy 9, SE NE NW NE Section 19-5n-8e, swabbed 337 barrels from the Cromwell sand at 2525-2625 feet. It may be deepened.

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Cracking of Shale Oil Results in Gasoline Yield

Washington—Shale oil made in the experimental oil shale plant, Rulison, Colo., operated by the United States Bureau of Mines, Department of Commerce, contains only about 8 per cent straight run gasoline. This is so small a percentage that it was thought desirable to run a pressure distillation on the whole crude and on the topped crude in order to compare the total amounts of gasoline produced.

Cracking experiments at 130 pounds pressure were made by the Bureau of Mines on the crude oil from which the gasoline had not been removed and on a portion of the same crude which had been skimmed. A small three-liter capacity still with fractionating tower was used for this work. A total of about 5,000 c. c. of oil was charged for each test, and the operating conditions were made as uniform as possible. The following table summarizes the results of the distillations:

	Topped Crude	Whole Crude
Cracked distillate	43.7%	46.7%
Cracked gasoline	37.9	38.0
Scrubber naphtha	3.3	3.2
Dry gas	15.3	12.8
Coke	27.8	26.1
Loss	9.7	11.0

Total Recovery of Gasoline Based on Original Oil

	Topped Crude
Skimmed gasoline	8.0%
Cracked gasoline	41.7
Scrubber naphtha	4.1
	53.8%

	Whole Crude
Cracked gasoline	42.2%
Scrubber naphtha	4.4
	49.6%

The crude gasoline distillates were then refined by treatment at about 0° F. with concentrated sulphuric acid. The process consists essentially of two steps; first, the removal of the nitrogen compounds with hydrochloric acid or very dilute sulphuric acid; second, at least three treatments with sulphuric acid for the removal of color and reduction of the sulphur content. The sulphur in the crude straight run, cracked distillate from the topped oil, and cracked distillate from the whole crude was 0.90, 0.40, and 0.45 per cent, respectively.

The refining losses were as follows:

	Nitrogen Loss	Sulphuric Acid Loss
Straight-run distillate	12%	28%
Cracked distillate from skimmed crude	5	10
Cracked distillate from whole crude	10	10

This treatment reduces the unsaturation from 35 to 18 per cent, and the sulphur to 0.1 per cent. The finished gasoline was water white and stable.

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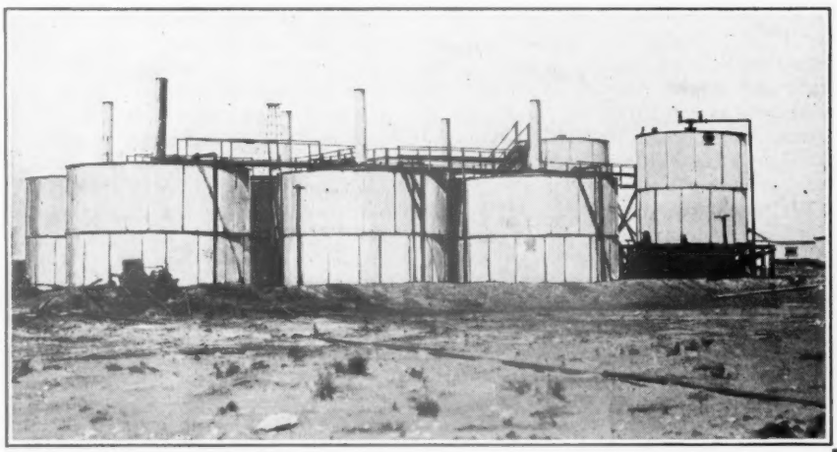


Maloneys hold the valuable vapors because they are vapor-tight throughout.

MADE OF KEYSTONE COPPER STEEL

MALONEY TANK MFG. COMPANY

Tulsa, Okla., U. S. A.

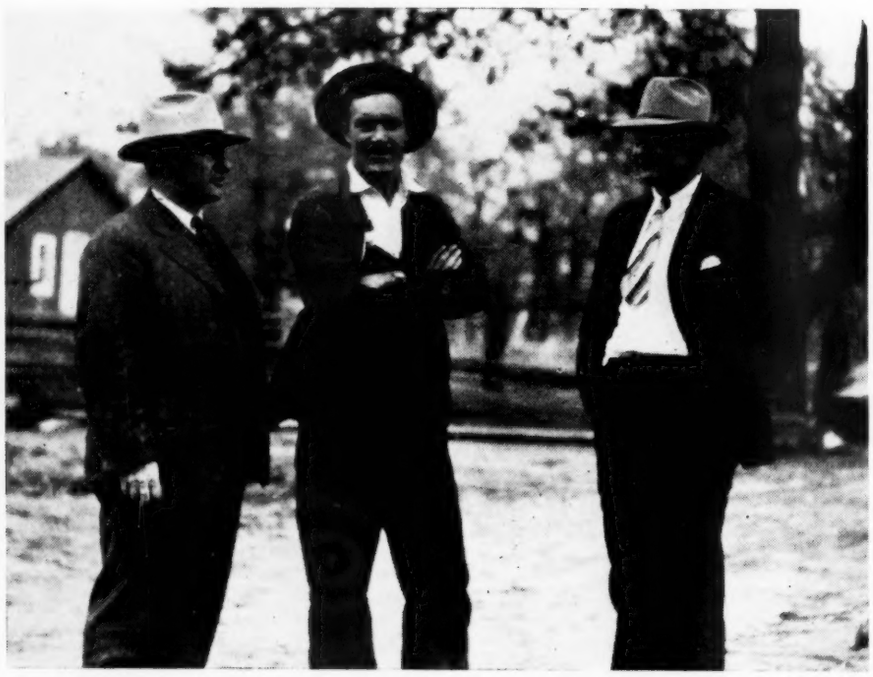
Distributers at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels. Packed in Steel-Bound Crates for Export.

MALONEY

XUM

With the Men in the Field



Bill Chisholm, left, Walter Sallee, and Sy Borden, visiting in the Pine Island field of North Louisiana. W. F. Chisholm is director of the Minerals Division, Department of Conservation, State of Louisiana, is secretary-treasurer of the Shreveport Geological Society, is president of the Petroleum Conservation Service, an organization of all state and federal bureaus in the Southwest, and is a member of the board of governors of the Southern district of the American Mining Congress.

Walter Sallee, engineer for Sheldon Machinery Corporation, was engaged in supervising engineering work for the Sheldon-Burden Drilling Company in South America, Trinidad and Mexico for a number of years. He is a graduate in engineering at the University of Kentucky.

S. P. Borden, now a consulting geologist, offices in the Ardis Building, Shreveport, is president of the Shreveport Geological Society. He is one of the best posted men in North Louisiana and has been active in a number of fields in that territory. He served the Gulf many years, joining that organization in 1919. He is a graduate of Missouri University.

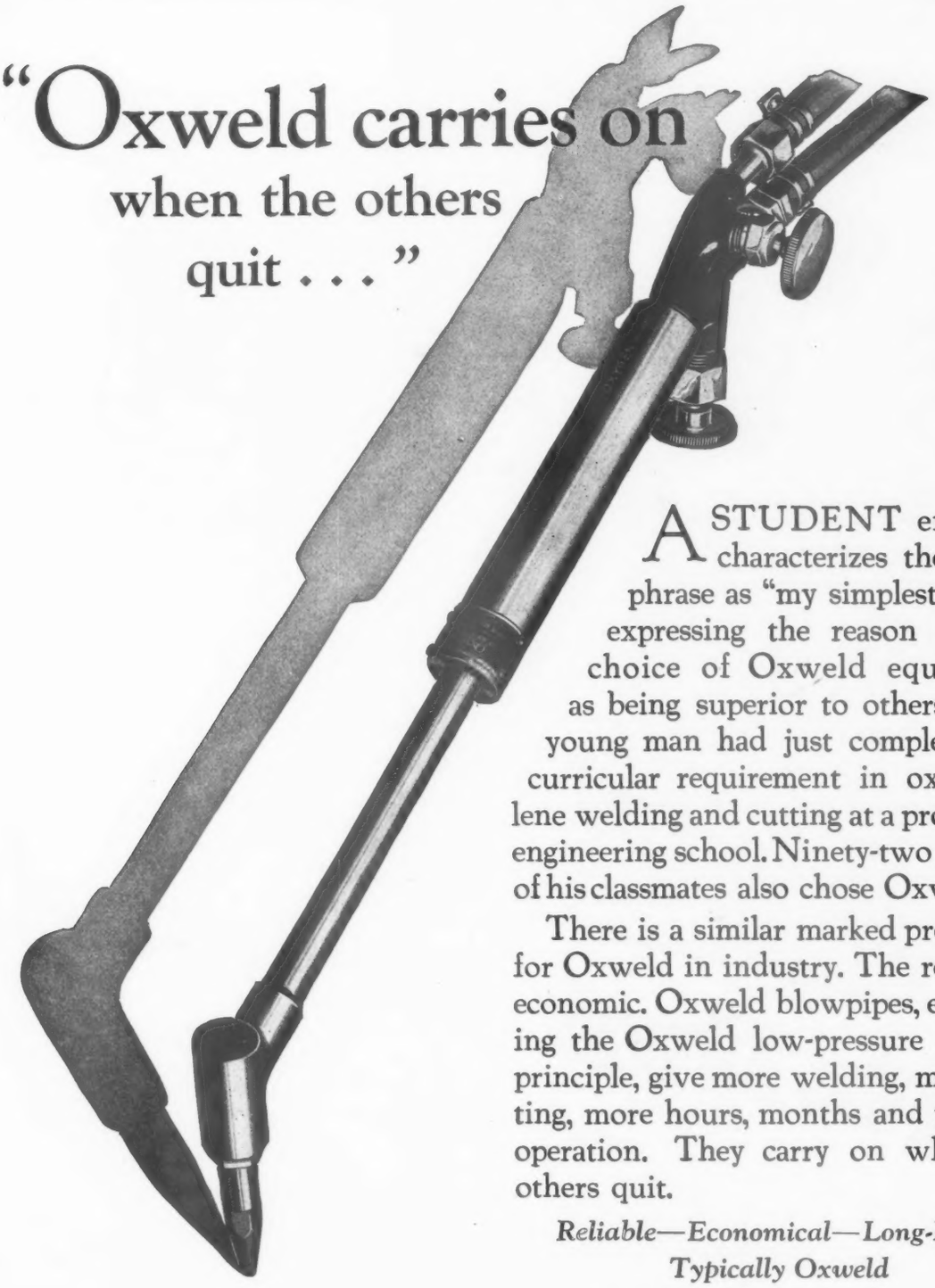
J. E. "Brick" Elliott, president, Elliott Petroleum Company in California and of Elliott Core Drilling Company has played a real part in making flying a popular means of visiting oil fields. He also makes a practice of flying to conventions, and commonly carries a live human cargo. In this picture they swooped down on El Paso for fuel en route to Ft. Worth for the annual geologists meeting in March. Left to right: Brick Elliott, J. M. and Mrs. Sickler of Los Angeles, E. B. Noble, R. R. Crandall and Pat Farris, pilot.

Roy Cunningham, formerly with the Waite Phillips Company and the Shell Petroleum Corporation, has been placed in charge of the marketing division of the Phillips Petroleum Company in Oklahoma.

R. J. Keown, formerly treasurer of the Union Oil Company of California, has been elected vice-president and treasurer of the company, and will remain in the Los Angeles office. Prior to his connection with Union Oil Company, Keown was with the Standard Oil Company.

C. F. Waite, of Wirt Franklin Petroleum Corporation in Southern Oklahoma is in charge of company tools. He is one of the most popular company men in his state, and one of the best known among contractors and drillers.

"Oxweld carries on when the others quit . . ."



A STUDENT engineer characterizes the above phrase as "my simplest way of expressing the reason for my choice of Oxweld equipment as being superior to others." This young man had just completed his curricular requirement in oxy-acetylene welding and cutting at a prominent engineering school. Ninety-two per cent of his classmates also chose Oxweld.

There is a similar marked preference for Oxweld in industry. The reason is economic. Oxweld blowpipes, embodying the Oxweld low-pressure injector principle, give more welding, more cutting, more hours, months and years of operation. They carry on when the others quit.

Reliable—Economical—Long-Lived
Typically Oxweld

OXWELD

WELDING AND CUTTING APPARATUS AND SUPPLIES

OXWELD ACETYLENE COMPANY
Unit of Union Carbide and Carbon Corporation

NEW YORK
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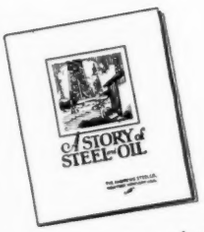
UCC

CHICAGO
Peoples Gas Building

SAN FRANCISCO
Adam Grant Building

STOCKS IN 38 CITIES

XUM



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Bits made from ASCO Steel are tougher than the hardest rock and can be easily tempered to resist abrasion without the loss of toughness.

Have your next bits made from ASCO Steel—put them to test in the toughest rock formations you can find—keep them drilling—watch the results—there is a difference.

ASCO Steel has been developed in our laboratories by metallurgists who have had years of experience in the making of steel for Oil and Gas Well Tools. Take advantage of the experience of our metallurgists. Let them help you with your steel problems.

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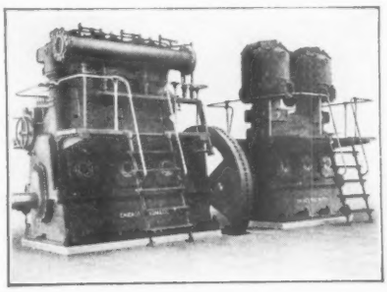
Say you saw it in The OIL WEEKLY

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



New Vertical Compressor

CHICAGO PNEUMATIC TOOL COMPANY

Chicago Pneumatic Tool Company is distributing its new vertical gas engine driven air or gas compressors. These compressors are described in Bulletin 785, published by the company, as consisting of the model RHG-75, three-cylinder, four-cycle gas engine coupled to a duplex, double-acting, single or two-stage compressor for a wide range of pressures and volumes.

This new unit has been especially designed for gasoline extraction service, and is equally adapted for well-flowing, for experimental work involving widely varying pressures and for general booster service.

The compressor is made in a wide variety of sizes up to 500 pounds per square inch and for both single and two-stage operation. Large frame doors make for convenient inspection and adjustment in the interior of the frame and crank-shaft. The crank-case is of heavy box construction, ribbed and cross-braced. The frame is a one-piece casting of the box type. Bored guides are provided for the crosshead and in the neck of each side is located a false head containing a stuffing box, which isolates the interior of the frame from cylinder leakage and permits ready access to the cylinder head piston rod gland.

Cylinders are fitted with removable liners carried in a variety of sizes for various pressures. Inlet and discharge valves are of the Simplate flat disc type.

The intercooler used on two-stage compressors has a riveted steel shell with riveted flanges. Into this shell seamless steel boiler tubes are nested. Their ends are expanded into steel tube sheets which are bolted to the shell flanges. Provision is made for catching and draining off condensed moisture, and hand holes facilitate cleaning.

The compressor is lubricated by a gear type oil pump, driven by a roller chain from the crank-shaft, oil being delivered to the main bearings under five to 10 pounds pressure. The overflow from this pump flood goes to lubricate the crosshead and crosshead pin bearing. Cylinders are oiled by a force feed lubricator belted to the crank-shaft.

The accompanying illustration of the new gas engine driven gas compressor shows the flexible coupling drive. More details may be had by writing for Bulletin No. 785.

CORE DRILL BULLETIN

Buck & Stoddard, 310 Union Oil Building, Los Angeles, have recently published a four-page folder describing, with illustrations, the new Copelin Core Drill. A new Stellite faced cutter head is used for each run with this bit. A used head is replaced following each run with a new cutter. This core bit, as described by the manufacturers, is designed for taking large cores for the size of the hole. The 9⅝-inch drill recovers a four-inch diameter core, the 7⅝-inch drill takes a three-inch core, and the 5⅝-inch takes a 2½-inch core.

The Buck & Stoddard bulletin covering the Copeland core drill describes the product by parts, taking up the cutter head, the locking sleeve, locknut, drill body, auxiliary locking device, inner barrel and core traps.

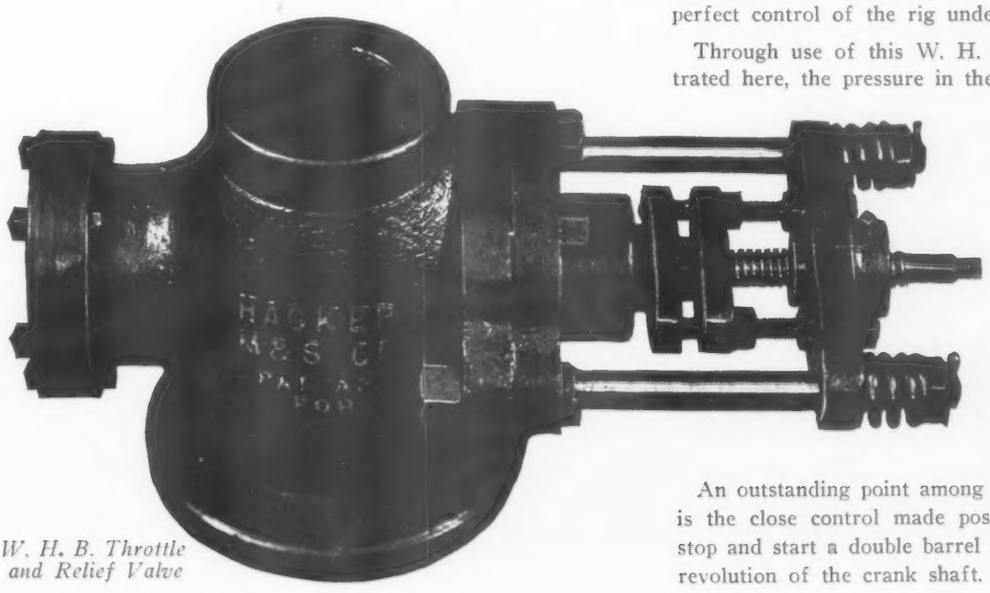
Further information may be had by writing the Los Angeles office.

Throttle and Relief Valve

NORVELL-WILDER SUPPLY COMPANY

W. H. B. balanced throttle and relief valve, a new valve being distributed by Norvell-Wilder Supply Company, through its Beaumont, Houston, Shreveport and Fort Worth stores, is so balanced under varying pressures as to eliminate wear and tear on the stem and bushings. The balancing further eliminates the kick in opening the valve, thereby allowing a more perfect control of the rig under all conditions.

Through use of this W. H. B. relief valve, which is illustrated here, the pressure in the manifold and cylinders is relieved at the will of the operator. It is positive in action and can be opened only when the main valve is closed.

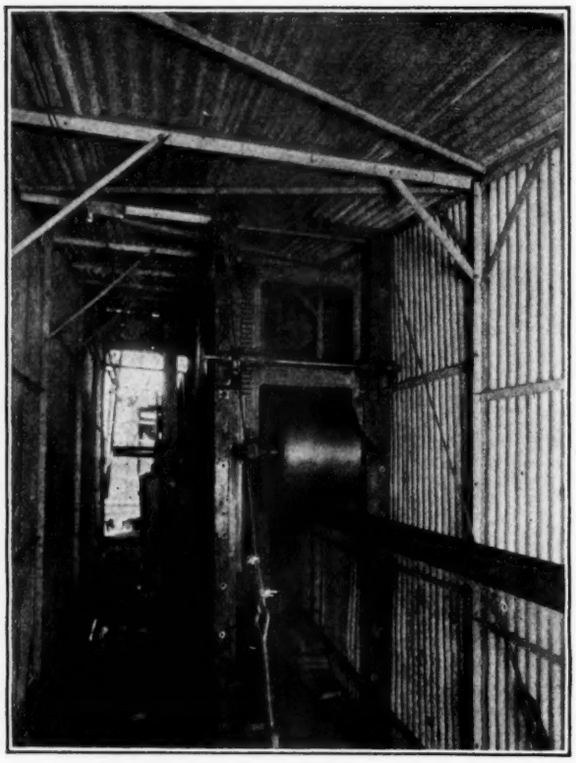


W. H. B. Throttle and Relief Valve

A quarter of a turn opens or closes the relief valve when the main valve is closed. It is designed to work as easily on 250 pounds of steam pressure as it does on 100 pounds. It is so built that increasing pressure does not increase friction on the screw.

An outstanding point among the features of the relief valve is the close control made possible for the driller, who may stop and start a double barrel engine several times in a single revolution of the crank shaft.

XUM



New Belt Tightener

HAPPY BELTING COMPANY

The accompanying illustration shows Happy Belting Company's new vertical tightener installed on Indian Territory Illuminating Oil Company's Goforth 10, at Seminole. This installation is a 14-inch, seven-ply Happy endless belt used on a 4200-foot beam well.

The new vertical tightener permits use of an endless belt, thereby eliminating all belt clamp trouble. It is designed to increase the arc of contact on the clutch or driving pulley as well as on the band wheel. By increasing the arc of contact on the driving pulley the belt operates under less tension, thus lengthening its life.

An economical feature of the tightener is seen in the increased wrap or arc of contact, which permits shorter centers, reducing the length of the belt and belt house.

The new tightener is designed for easy adjustment and made so that the pumper can tighten or loosen tension on the belt while in operation. The tightener is also designed to act as a guide for the belt, keeping it properly lined up on the driving pulley and band wheel. It acts as a shock absorber, transmitting a smooth stroke to the polish rod because of the increased arc of contact which allows the belt to run more loosely.

The pulley is mounted on ball bearings equipped with the Alemite system of greasing, and the lubrication job is lengthened to only two or three times annually.

Happy Belting Company of Tulsa and Seminole will give more detailed information upon request.

The Land Supply Company, Oklahoma City, which has been a distributor of A. Y. McDonald Manufacturing Company, Dubuque, Iowa, products, has just opened a supply store in Tulsa, at 307 East Third Street. With this expansion the oil handling equipment of A. Y. McDonald Company will be available for immediate delivery to Tulsa customers. The Oklahoma City store of the Land Supply Company is located at 516 North Broadway.

OPEN EASTERN OFFICE

An eastern branch office to serve the eastern section of the United States, including Atlantic seaboard territory, has been opened by McEverlast, Inc., manufacturers of protective coatings for the oil industry, at 1754-55 Graybar Building, in New York. G. R. March, vice-president of the company, is in charge.

A branch office has also been opened in Chicago to serve the north midwest territory and is in charge of Lee S. Trainor. This office is at 1952 Pure Oil Building.

D. T. Mason is branch manager of McEverlast, Inc., offices at Dallas, Texas, at 1314-15 Magnolia Building. His territory covers the south mid-central states, including the Mid-Continent field. The Dallas office is augmented with a branch factory located there with a monthly capacity of 35,000 gallons. This factory began operations on April 15. Its capacity is being doubled.

General offices of McEverlast, Inc., are located at 111 West Seventh Street, Los Angeles. Pacific Coast territory is covered from that headquarters.

WERTZBERGER AT FORT WORTH

Texas sales offices of the Wertzberger Derrick Company of Tulsa have been established at 902 West Broadway, Fort Worth, under management of H. N. Royster. Mr. Royster is a practical oil man of long experience in the field, having been engaged in the production branch of the industry in Sumatra, Mexico, and other foreign countries. It is the intention of the Wertzberger Derrick Company to carry a complete stock at the more important field points in the state.

C. A. ANDERSON, JR.

NEW OFFICERS

C. A. Anderson, Jr., as new president and director of sales of the Pittsburgh Valve, Foundry & Construction Company, has headed the new management since March 1. Anderson has been vice president and sales manager since 1921 and has more than 20 years service with the organization. He established the company's Philadelphia office following a period as manager of the New York office, and returned to Pittsburgh in 1922.

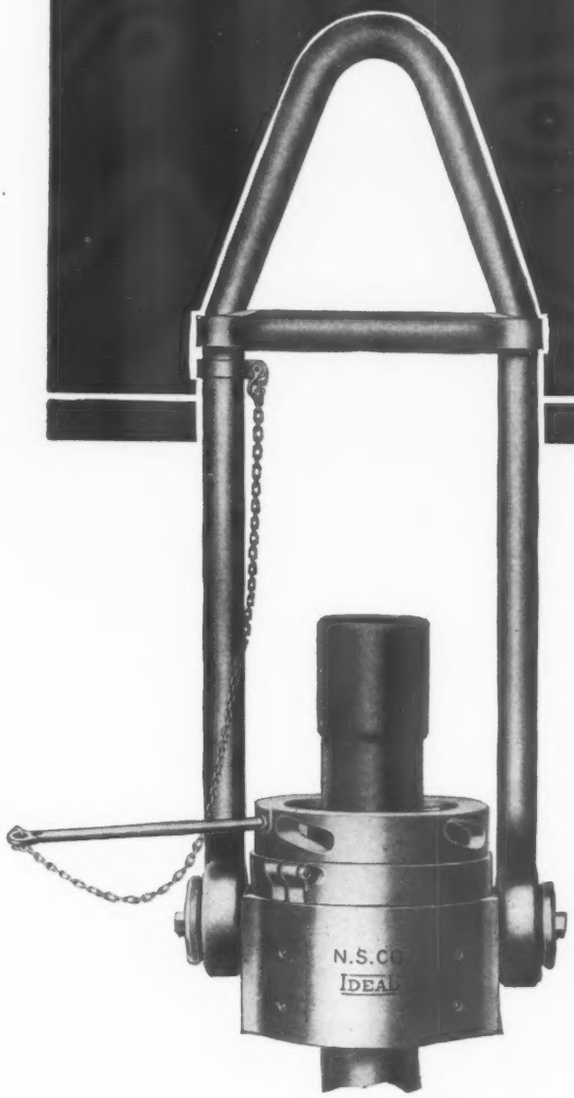
A. V. Wadsworth, formerly secretary-treasurer and manager of Westcott Valve Manufacturing Company, East St. Louis, is now vice president and general manager of Pittsburgh Valve, Foundry & Construction Company. His experience in the oil and gas industry dates back to 1890, when he joined National Transit Company in Oil City. Later he was associated with Buckeye Traction Ditcher Company, Findlay, Ohio. He built up the Pomroy Company of Pomroy Ohio, which was absorbed by Parkersburg Rig & Reel Company. He joined Westcott Valve Company following the death of Henry Westcott and built the East St. Louis plant.

A. V. WADSWORTH

Other changes have been made in the company since changing the management. Blake V. Fisher, formerly with Goulds Pumps, Inc., and for the past few years a representative of Westcott Valve Company in Texas, is district manager at Dallas, and has representatives in Tulsa, Shreveport, Houston and New Orleans. The Eastern division is in charge of W. H. "Bill" Arnold, a veteran employe of the company. The new arrangement provides for direct representation at Boston, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, Chicago, St. Louis, Tulsa, Dallas, Houston, Shreveport and New Orleans.

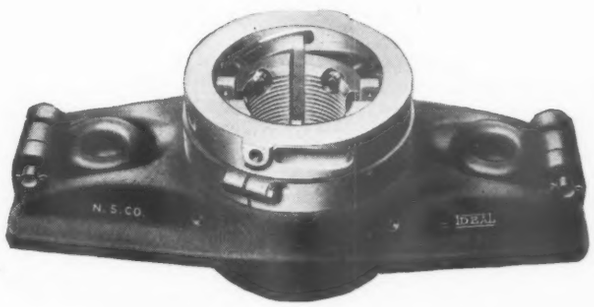
XUM

IDEAL
AUTOMATIC GRIP ELEVATOR AND GRIP SPIDER



SAFETY
WITH
SPEED
FOR THE
DEEPEST WELLS

AT KETTLEMAN HILLS CALIFORNIA A CREW RECENTLY SET 5030 FEET OF 11¾-INCH O. D. 63# NATIONAL HIGH TENSILE CASING IN 13 HOURS USING THE IDEAL AUTOMATIC GRIP ELEVATOR AND AUTOMATIC GRIP SPIDER

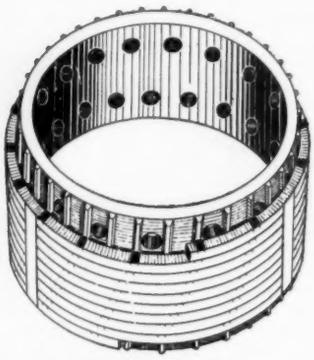


BUILT IN SIZES
7 TO 20 INCH INCLUSIVE

THE
NATIONAL SUPPLY
COMPANIES

Say you saw it in The OIL WEEKLY

If you want to screen More Oil
USE A
STANCLIFF SCREEN



All the Pipe a screen—not just the holes

1. —STANCLIFF (Patent) Well Screen has outside diameter that is less than the diameter of couplings; and can be set through any pipe which will pass the couplings.
2. —Ribs on pipe allow .061 of an inch for oil circulation and permit free flowing of oil into pipe, after straining through the wires.
3. —This is the strongest strainer on the market, because the ribs strengthen pipe as much as perforations have weakened it.
4. —Square wire gives STANCLIFF Screen greater life without "sanding," because sand must cut through entire width of wire before affecting screen.
5. —Square wire is lugged from top to bottom at regular intervals spacing and bracing wire absolutely uniform at bottom as well as top.
6. —By varying spacing lugs on wire, we make strainer to screen any size sand encountered in drilling—on any size or kind of pipe desired.

WRITE FOR INFORMATION
and remarkable facts on
FAST SCREENING

HOWARD SMITH COMPANY
2412 RAILROAD AVE. at SAWYER ST.
HOUSTON xxx TEXAS
Manufacturers of
WELL SCREEN-PACKERS
SET SHOES - TONGS

Squeaks from the Bull Wheel

A lady advertised for a maid, and was showing an applicant for the place over the house.

She had been very liberal in her promises of privileges—afternoons off, evenings out and so on—and it looked as though the two had come to an agreement, when just as she was leaving the house the girl asked:

"Do you do your own stretchin'?"

"Do we do what?" asked the puzzled mistress.

"Stretchin'," repeated the girl. "Do you put all the food on the table at dinner and stretch for it, or must I pass it around?"

A small boy came hurriedly down the street, and halted breathlessly in front of a stranger who was walking in the same direction.

"Have you lost half a dollar?" he asked.

"Yes, yes, I believe I have," said the stranger feeling in his pockets. "Have you found one?"

"Oh, no," said the boy. "I just want to find out how many have been lost today. Yours makes fifty-five.

"I'd like to see some er—er—er-r silk stockings."

"Do you want them for your wife, or shall I show you something better?"

"Is your husband tight, like mine?"

"Is he? Say, every time he takes a penny out of his pocket the Indian blinks at the light."

"Is he a good driver?"

"Well, when the road turns the same time he does it's just a coincidence."

"London is the foggiest city in the world."

"But I've been to a foggier place than London."

"Where was that?"

"I don't know where it was, it was so foggy."

"He's got a lot of culture, hasn't he?"

"Yes, but it's all physical."

"What is your pleasure, sir?" said the teller to the customer.

"Golf," replied the gentleman, "but I came here to get a check cashed."

She: "I suppose you're just crazy to kiss me?"

He: "You're right. I have to be."

"How long will this lawn mower last?" asked the careful buyer.

"How many and what kind of neighbors have you?" countered the experienced hardware dealer.

I say, waitah, neveh bring me a steak like that again.

Why not sir?

It simply isn't done, old thing!

The efficiency expert is worse than the statistician but he belongs to the same breed. He will tell you that if a farmer's boy can pick six quarts of cherries in an hour, and a girl five quarts, the two of them together will pick eleven quarts. But any farmer knows that the two of them together won't pick any.—Gage Readings.

"What would the interest be on $500.00 at 3%. Abie-pay attention."

"For 3% I am not interested."

"Abie, have you done anything about that Black Hand letter?"

"Oh, ain't I, though. I turned it over to my insurance company. They got $20,000 tied up in me; let them worry."

"Why don't you get out and find a job? When I was your age I was working for $3 a week and at the end of five years I owned the store."

"You can't do that nowadays, Dad; they have cash registers."

"Bob told me I was the eighth wonder of the world."

"What did you say?"

"Told him not to let me catch him with any of the other seven."

I've been watching that mechanic for the last fifteen minutes. There's a man who knows his business. He didn't spill a dorp of oil on the ground. He put down the hood gently, fastened it securely and left no fingerprints on it. He wiped his hands on clean waste before opening the door, spread a clean cloth over the upholstery, meshed the gears noiselessly and then drove slowly and with caution into the street."

"Yeah. That's his own car."

Some time ago, a resident in Dublin entertained an old Presbyterian minister who was rather short sighted, and loved to prowl about the city by himself.

On returning home one evening, his host found him reading the Bible and muttering to himself: "Very strange, remarkably strange. I have read Genesis XXX through three times and fail to make the connection."

The host naturally inquired what was troubling his visitor.

"Why, I cannot understand why so many of the shops have reference to Genesis XXX inscribed on them. I have seen it everywhere, even on barrels."

"Oh," he exclaimed, laughingly, "you mean Guiness' XXX."

XUM

"NATIONAL"
seamless steel
couplings
ANOTHER link in the chain of "NATIONAL" Service—a complete line of couplings for all your requirements. Thus, it is possible for you to retain the same high quality in your reconditioned material that you have in an original string of "NATIONAL" A.P.I. Drill Pipe, Casing, Tubing and in your Line Pipe. These couplings are made in every way to match the satisfactory performance of all "NATIONAL" Oil Country Tubular Goods.
Especially designed to insure correct alignment of joints; to meet the most exacting thread standards; to resist galling; to make a good, tight joint; to maintain interchangeability; to resist deformation in supporting long strings; to minimize abrasive action on threads in breaking up joints, and to raise joint-making practice to a new and higher standard.
Your local Supply House carries them in stock for prompt shipment. For further information, ask for Booklet—"NATIONAL" Seamless Steel Couplings.
NATIONAL TUBE COMPANY • Pittsburgh, Pa.
Subsidiary of United States Steel Corporation